

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	WO-2006009464-\$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/26 16:27
L2	0	WO-2006009465-\$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/26 16:28
L3	0	EP-1773397-\$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/26 16:28
L4	0	("2007015795").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/06/26 16:37
L5	1	("20070015795").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/06/26 16:44
L6	1	("20070009608").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/06/26 16:44
L7	123	polar adj head.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/26 17:07
L8	85	polar adj head adj group.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/26 17:08
L9	145	lipid adj compound.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/26 17:08
L10	2	l8 and l9	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/26 17:08
L11	17	((ROLF) near2 (BERGE)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2007/06/26 17:08
S15	161	((ANDREW) near2 (MILLER)).INV.	USPAT	OR	ON	2007/06/19 08:25
S16	292	((ANDREW) near2 (MILLER)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 09:28

## EAST Search History

S17	128	((ANDREW) near2 (MILLER)).INV.	EPO; JPO; DERWENT	OR	ON	2006/11/16 09:28
S18	7	((MICHAEL) near2 (JORGENSEN)). INV.	EPO; JPO; DERWENT	OR	ON	2006/11/16 09:28
S19	12	((ROLF) near2 (BERGE)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2007/06/20 09:55
S20	9	((ROLF) near2 (BERGE)).INV.	EPO; JPO; DERWENT	OR	ON	2006/11/16 09:29
S21	12	((ROLF) near2 (BERGE)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 09:29
S22	12	((ROLF) near2 (BERGE)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 09:29
S23	1	((JON) near2 (SKORVE)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 09:30
S24	1	((JON) near2 (SKORVE)).INV.	EPO; JPO; DERWENT	OR	ON	2006/11/16 09:30
S25	3604	"514/54".CCLS.	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 09:41
S26	2078	S25 and @ad<="20020620"	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 12:37
S27	226	S26 and phospholipid	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 11:44
S28	5	S27 and sulfur-containing	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 09:43
S29	57	S27 and sulfur	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 09:43
S31	1163	"536/53".CCLS.	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 11:42
S32	600	S31 and @ad<="20020620"	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 12:38
S33	87	S32 and phospholipid	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 12:08

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S36	77	S35 and @ad<="20020620"	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 12:08
S37	1142	"514/547".CCLS.	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 12:07
S38	625	S37 and @ad<="20020620"	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 12:08
S39	93	S38 and phospholipid	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 12:08
S40	271	(564/1).CCLS.	US-PGPUB; USPAT	OR	OFF	2006/11/16 12:38
S41	124	S40 and @ad<="20020620"	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/16 12:38
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S43	0	WO-03014073-\$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/19 08:26
S44	0	WO-200314073-\$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/19 08:28
S45	0	("2004192908").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/06/19 08:28
S46	1	("20040192908").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/06/19 08:28
S47	0	("2004/0192908").URPN.	USPAT	OR	ON	2007/06/19 08:34
S48	1	("5399353").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/06/19 08:34
S49	7	("5399353").URPN.	USPAT	OR	ON	2007/06/19 08:41
S50	0	WO-2003011252-\$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/26 16:25

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S58	0	("7064174").URPN.	USPAT	OR	ON	2007/06/20 09:53
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S65	310	((ANDREW) near2 (MILLER)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2007/06/20 09:56
S66	148	((ANDREW) near2 (MILLER)).INV.	EPO; JPO; DERWENT	OR	ON	2007/06/20 09:56
S67	9	((MICHAEL) near2 (JORGENSEN)). INV.	EPO; JPO; DERWENT	OR	ON	2007/06/20 09:56
S68	15	((ROLF) near2 (BERGE)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2007/06/20 09:56
S69	13	((ROLF) near2 (BERGE)).INV.	EPO; JPO; DERWENT	OR	ON	2007/06/20 09:56
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S72	1	((JON) near2 (SKORVE)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2007/06/20 09:56
S73	2	((JON) near2 (SKORVE)).INV.	EPO; JPO; DERWENT	OR	ON	2007/06/20 09:56
S74	324	S64 or S65 or S66 or S67 or S68 or S69 or S70 or S71 or S72 or S73 and phospholipid	US-PGPUB; USPAT; USOCR	OR	ON	2007/06/20 09:58
S75	71	S74 and sulfur	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/20 09:59
S76	486	S64 or S65 or S66 or S67 or S68 or S69 or S70 or S71 or S72 or S73 and phospholipid	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/25 17:23

## EAST Search History

S77	78	S76 and sulfur	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/20 10:43
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S81	1	("20020188023").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/06/20 10:48
S82	145	lipid adj compound.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/25 17:23
S83	114	phg.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/26 17:07
S84	2	S82 and S83	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/06/25 17:24

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 DICTIONARY FILE UPDATES: 21 JUN 2007 HIGHEST RN 938223-21-3

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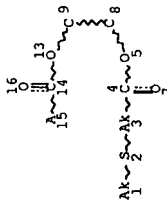
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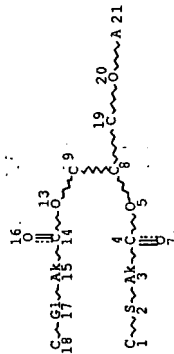
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 DEFAULT ECLEVEL IS LIMITED

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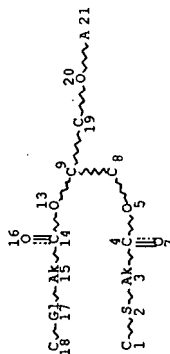
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VAR G1=CH2/S/SE/O  
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 CONNECT IS X2 RC AT 9  
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 RING(S) ARE ISOLATED OR EMBEDDED  
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 L4 STR



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GRAPH ATTRIBUTES:  
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 L6 41 SEA FILE-REGISTRY ABB=ON PLU=ON L5 AND P=>1

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L7 16 L6

=> sel hit 17 1-16 rn  
E1 THROUGH E41 ASSIGNED

L7 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2006:79367 CAPLUS Full-text  
DOCUMENT NUMBER: 144:156766

TITLE: Composition comprising plant, fish oils and non-oxidizable fatty acid entities and pharmaceutical or nutritional uses thereof

INVENTOR(S): Berge, Rolf

PATENT ASSIGNEE(S): Thia Medica AS, Norway

SOURCE: PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006009464	A2	20060126	WO 2005-NO271	20050719
WO 2006009464	A3	20060824		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CL, CM, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GM, GR, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, BY, KG, KZ, MD, RU, TJ, TM				
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NO 2004003093	A	20060120	NO 2004-3093	20040719
NO 2004005544	A	20060126	NO 2004-5544	20041217
AU 2005264781	A1	20060126	AU 2005-264781	20050719
CA 2574366	A1	20060126	CA 2005-2574366	20050719
EP 1784223	A2	20070516	EP 2005-772164	20050719
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,				

IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR  
US 2007009608 A1 20070111 US 2006-550129 20060509  
PRIORITY APPLN. INFO.: NO 2004-3091 A 20040719

NO 2004-3093 A 20040719  
NO 2004-5544 A 20041217  
WO 2005-NO271 W 20050719

OTHER SOURCE(S): MARPAT 144:156766

AB The present invention concerns a composition prepared from a combination of plant oil and/or fish oil and a compound comprising non  $\beta$ -oxidizable fatty acid analogs, and the use of said composition for the preparation of a pharmaceutical or nutritional composition for the prevention and/or treatment of insulin resistance, obesity, diabetes, fatty liver, hypercholesterolemia, dyslipidemia, atherosclerosis, coronary heart disease, thrombosis, stenosis, secondary stenosis, myocardial infarction, stroke, elevated blood pressure, endothelial dysfunction, procoagulant state, polycystic ovary syndrome, the metabolic syndrome, cancer, inflammatory disorders and proliferate skin disorders. The present invention also concerns an animal feed prepared from a combination of plant oil and/or fish oil and a compound comprising non  $\beta$ -oxidizable fatty acid analogs, the use of said feed for improving the body composition of an animal, and a product produced from said animal.

IT 636589-28-1

RL: BSU (Biological study, unclassified); PFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

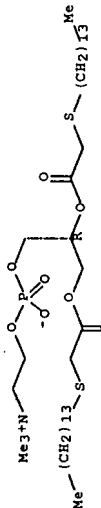
(composition comprising plant, fish oils and non-oxidizable fatty acid entities and its pharmaceutical or nutritional uses thereof)

RN 636589-28-1 CAPLUS

CN 3,5,9-Trioxa-12-thia-4-phosphahexacosan-1-aminium,

4-hydroxy-N,N,N-trimethyl-10-oxo-7-[[[(tetradecylthio)acetyl]oxy]]-, inner salt, 4-oxide, (7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L7 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2006:75330 CAPLUS Full-text

DOCUMENT NUMBER: 144:156735

TITLE: Composition containing protein material and compounds comprising non-oxidizable fatty acid entities

INVENTOR(S): Berge, Rolf

PATENT ASSIGNEE(S): Thia Medica AS, Norway

SOURCE: PCT Int. Appl., 64 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006009465	A2	20060126	WO 2005-N0272	20050719
WO 2006009465	A3	20060914		
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AU 2003264782	A1	20060126	AU 2005-264782	20050719
CA 2574381	A1	20060126	CA 2005-2574381	20050719
EP 177397	A2	20070418	EP 2005-772070	20050719
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US 2007015795	A1	20070118	US 2006-550033	20060509
PRIORITY APPLN. INFO.:			NO 2004-3091	A 20040719
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			WO 2005-N0272	W 20050719

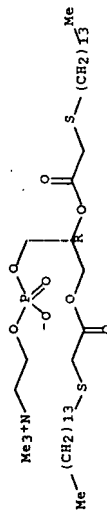
OTHER SOURCE(S): MARPAT 144:156735

AB The present invention concerns a composition prepared from a combination of non- $\beta$ -oxidizable fatty acid entities and a protein material, and the use of said composition for the preparation of a pharmaceutical or nutritional composition for the prevention and/or treatment of insulin resistance, obesity, diabetes, fatty liver, hypercholesterolemia, dyslipidemia, atherosclerosis, coronary heart disease, thrombosis, stenosis, secondary stenosis, myocardial infarction, stroke, elevated blood pressure, endothelial dysfunction, procoagulant state, polycystic ovary syndrome, the metabolic syndrome, cancer, inflammatory disorders and proliferate skin disorders. An alternative embodiment of the invention includes oil in the composition. The present invention also concerns an animal feed prepared from a combination of a protein material and a compound comprising non- $\beta$ -oxidizable fatty acid analogs, the use of said feed for improving the body composition of an animal, and a product produced from said animal.

IT RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(composition containing protein and non-oxidizable fatty acid entities for prevention and treatment of metabolic disorders and improvement of animal-based products)

RN 636589-28-1 CAPLUS  
CN 3,5,9-Trifluoro-12-thia-4-phosphahexacosan-1-aminium, 4-hydroxy-N,N-trimethyl-10-oxo-7-[[[(tetradecylthio)acetyl]oxy]-, inner salt, 4-oxide, (7R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L7 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2004:121684 CAPLUS Full-text  
DOCUMENT NUMBER: 140:327017  
TITLE: Engineered Lipids That Cross-Link the Inner and Outer Leaflets of Lipid Bilayers  
AUTHOR(S): Halter, Michael; Nogata, Yoichi; Dannenberg, Oliver; Sasaki, Tomikazu; Vogel, Viola  
CORPORATE SOURCE: Center for Nanotechnology, Departments of Bioengineering and Chemistry, University of Washington, Seattle, WA, 98195, USA  
SOURCE: Langmuir (2004), 20(6), 2416-2423  
CODEN: LANGD5; ISSN: 0743-7463  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 140:327017

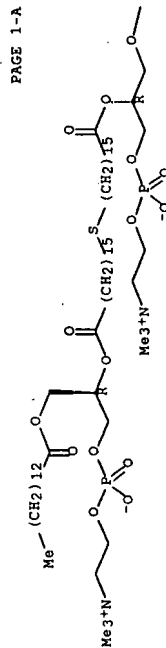
AB The application of supported lipid bilayer systems as mol. sensors, diagnostic devices, and medical implants is limited by their lack of stability. In an effort to enhance the stability of supported lipid bilayers, three pairs of phosphatidylcholine lipids were designed to cross-link at the termini of their 2-position acyl chain upon the formation of lipid bilayers. The crosslinked lipids span the lipid bilayer, resembling naturally occurring bola-amphiphiles that stabilize archaeobacterial membranes against high temps. The three reactions investigated here include the acyl chain crosslinking between thiol and bromine groups, thiol and acryloyl groups, and cyclopentadiene and acryloyl groups. All three reactive lipid pairs were found to cross-link in liposomal membranes, as determined by thin-layer chromatog., ion-spray mass spectrometry, and <sup>1</sup>H NMR. The monolayer film properties of the reactive amphiphiles were characterized by surface pressure-area isotherms and showed that stable monolayers formed at the air-water interface with limiting mol. areas comparable to that of pure saturated phosphatidylcholine lipids. Langmuir-Blodgett bilayers of dimyristoylphosphatidylcholine incorporating 15 mol % of the reactive thiol and acryloyl lipids had diffusion coeffs. comparable with pure dimyristoylphosphatidylcholine, while bilayers with more than 25 mol % of the reactive lipids were immobile, suggesting that interleaflet crosslinking of the lipids inhibited membrane diffusion. Our results show that the reactive lipids can cross-link within a lipid bilayer and are suitable for assembling supported lipid bilayers using Langmuir-Blodgett deposition. By using terminally reactive amphiphiles to build up supported lipid bilayers with crosslinked leaflets, bola-amphiphiles can be incorporated into asym. solid supported membranes to increase their stability in biosensor and medical implant applications.

IT 678139-86-1P 678139-88-3P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(engineered lipids that crosslink the inner and outer leaflets of lipid bilayers)



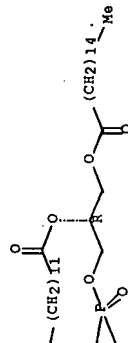
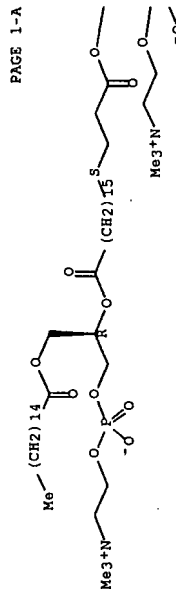
RN 678139-86-1 CAPLUS  
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Absolute stereochemistry.



RN 678139-88-3 CAPLUS  
 CN 3,5,8,21,42,45,47-Heptaosa-25-thia-4,46-diphosphanotetracontane-1,49-diaminium, 4,46-dihydroxy-N,N,N',N',N'-hexamethyl-9,22,41-trioxo-7,43-bis[[[(1-oxohexadecyl)oxymethyl]-, bis(inner salt), 4,46-dioxide, (7R,43R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



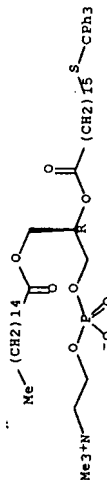
IT 678139-84-9P 678139-87-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent)

(engineered lipids that crosslink the inner and outer leaflets of lipid bilayers)

RN 678139-84-9 CAPLUS

CN 3,5,9-Trioxa-4-phosphapentacosan-1-aminium, 4-hydroxy-N,N,N'-trimethyl-10-oxo-7-[[[(1-oxo-16-[[triphenylmethyl]thio]hexadecyl)oxy]-, inner salt, 4-oxide, (7R)- (9CI) (CA INDEX NAME)

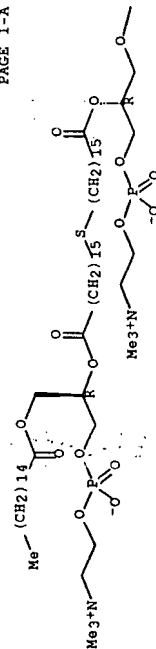
Absolute stereochemistry.



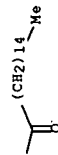
RN 678139-87-2 CAPLUS

CN 3,5,8,42,45,47-Hexaosa-25-thia-4,46-diphosphanotetracontane-1,49-diaminium, 4,46-dihydroxy-N,N,N',N',N'-hexamethyl-9,41-dioxo-7,43-bis[[[(1-oxohexadecyl)oxymethyl]-, bis(inner salt), 4,46-dioxide, (7R,43R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



PAGE 1-B

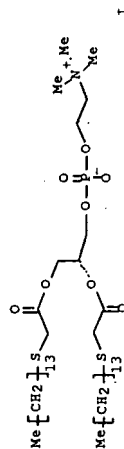


REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 16 CAPIUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2004:2894 CAPIUS Full-text  
 DOCUMENT NUMBER: 140:42422  
 TITLE: Preparation of sulfur-containing phospholipid  
 triglyceride derivatives as antidiabetic agents  
 INVENTOR(S): Muller, Andrew David; Jorgensen, Michael Rael;  
 Berger, Rolf; Skovve, Jon  
 PATENT ASSIGNEE(S): Ic Vec Limited, UK; Thia Medica AS  
 SOURCE: PCT Int. Appl., 113 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

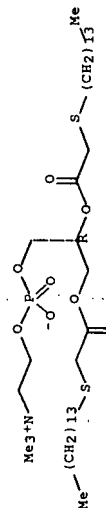
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004/00854	A1	20031231	WO 2003-GB2582	20030616
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, BG, CH, CY, CZ, DE, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2490121	A1	20031231	CA 2003-2490121	20030616
AU 2003278602	A1	20040106	AU 2003-278602	20030616
EP 1515978	A1	20050323	EP 2003-740736	20030616
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1675229	A	20050928	CN 2003-817434	20030616
JP 2005229969	T	20051006	JP 2004-515006	20030616
NZ 537762	A	20070223	NZ 2003-537762	20030616
IN 2004002846	A	20060210	IN 2004-CN2846	20041215
NO 2004005562	A	20050217	NO 2004-5562	20041220
ZA 2005005558	A	20051017	ZA 2005-558	20050120
US 2006105987	A1	20060518	US 2005-518427	20050930
PRIORITY APPIN. INFO.:			GB 2002-14267	A 20020620

OTHER SOURCE(S):  
 GI MARPAT 140:42422



AB The present invention provides a lipid compound comprising at least one non-polar moiety and a polar moiety, wherein each or at least one non-polar moiety is of the formula X-Y-Z-, wherein X is a hydrocarbyl chain, Y is selected from at least one of S, Se, SO<sub>2</sub>, SO, and O, and Z is an optional hydrocarbyl group, wherein the polar moiety is of the formula -[C(O)]<sub>m</sub>PHG, wherein PHG is a polar head group, and wherein m is the number of non-polar moieties. Thus, esterified tetradecylthioacetic acid (TTA) phosphatidylcholines (PCs) and triacylglycerides (TAGs), e.g. I, were prepared. Effect of esterified and non-esterified TTA on palmitoyl-CoA oxidation in rat liver homogenate. Effect of esterified and non-esterified TTA on the mitochondrial carnitine palmitoyltransferase-II activity. Effect of esterified and non-esterified TTA on the 3-hydroxy-3-methylglutaryl-CoA synthase activity in rat liver homogenate. Effect of esterified and non-esterified TTA on the fatty acyl-CoA oxidase activity in rat liver homogenate. Effect of esterified and non-esterified TTA containing liposomes on plasma lipids in male Wistar rats. The compounds of the present invention (TTA-PC and TTA-TAG) have been demonstrated to increase fatty acid oxidation and decrease plasma and hepatic lipid levels.

IT 636589-28-1P  
 RI: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (Preparation of sulfur-containing phospholipid triglyceride derivs. as antidiabetic agents)  
 RN 636589-28-1 CAPIUS  
 CN 3,5,9-Trioxa-12-thia-4-phosphahexacosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[[[tetradecylthio]acetyl]oxy]-, inner salt, 4-oxide, (7R)- (9CI) (CA INDEX NAME)



Absolute stereochemistry.

IT 636589-31-6P 636589-32-7P 636589-33-8P

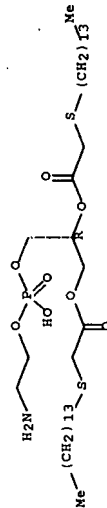
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(Preparation of sulfur-containing phospholipid triglyceride derivs. as anti-diabetic agents)

RN 636589-31-6 CAPLUS

CN Acetic acid, (tetradecylthio)-, (1R)-1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



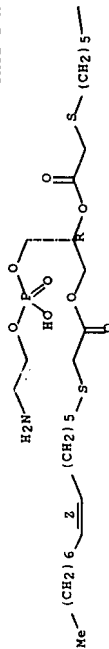
RN 636589-32-7 CAPLUS

CN Acetic acid, [(6Z)-6-tetradecenylthio]-, (1R)-1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)

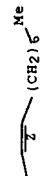
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

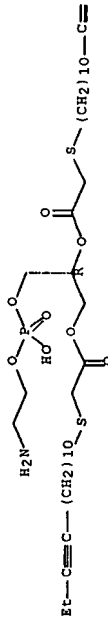


RN 636589-33-8 CAPLUS

CN Acetic acid, [(11-tetradecynylthio)-, (1R)-1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



IT 636589-29-2P 636589-30-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(Preparation of sulfur-containing phospholipid triglyceride derivs. as anti-diabetic agents)

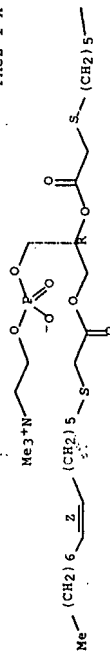
RN 636589-29-2 CAPLUS

CN 3,5,9-Trioxa-12-thia-4-phosphahexacos-18-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[[[(6Z)-6-tetradecenylthio]acetyl]oxy]-, inner salt, 4-oxide, (7R,18Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

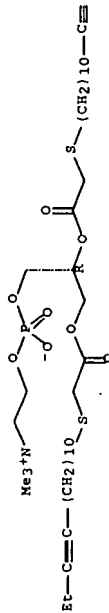


RN 636589-30-5 CAPLUS

CN 3,5,9-Trioxa-12-thia-4-phosphahexacos-23-yn-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[[[(11-tetradecynylthio)acetyl]oxy]-, inner salt, 4-oxide, (7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



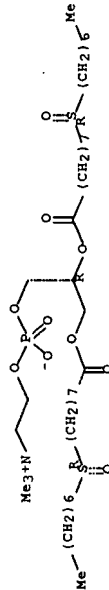
PAGE 1-B

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REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2003:189315 CAPLUS Full-text  
 DOCUMENT NUMBER: 139:133726  
 TITLE: A chemoenzymatic route to quasisymmetrical chiral sulfoxides and their phospholipid derivatives  
 AUTHOR(S): Hodgson, Derek; Buist, Peter H.  
 CORPORATE SOURCE: Department of Chemistry, Carleton University, Ottawa, ON, K1S 5B6, Can.  
 SOURCE: Tetrahedron: Asymmetry (2003), 14(6), 641-644  
 CODEN: TASYE3; ISSN: 0957-4166  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 139:133726  
 AB The chain-length dependence of yeast A9 desaturase-mediated sulfoxidn. was examined Me (R)-9-thiahexadecanoate S-oxide (9% ee) and the corresponding phosphatidylcholine diester was synthesized.  
 IT 566170-58-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (chemoenzymic preparation of quasisym. chiral sulfoxides and their phospholipid derivs. via bakers yeast mediated sulfoxidn.)  
 RN 566170-58-9 CAPLUS  
 CN 3,5,9-Trioxo-18-thia-4-phosphapentacosan-1-aminium, 7-[[18-[(R)-heptylsulfinyl]-1-oxooctyl]oxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4,18-dioxide, (7R,18R)- (9CI) (CA INDEX NAME)

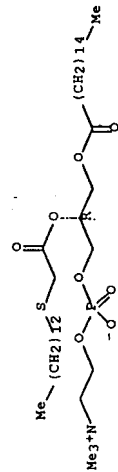
Absolute stereochemistry.



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

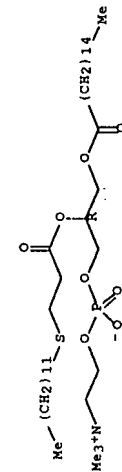
L7 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2002:634613 CAPLUS Full-text  
 DOCUMENT NUMBER: 138:35002  
 TITLE: Origin of membrane dipole potential: Contribution of the phospholipid fatty acid chains  
 AUTHOR(S): Peterson, Uwe; Mannoek, David A.; Lewis, Ruthven N. A. H.; Pohl, Peter; McElhane, Ronald N.; Pohl, Elena E.  
 CORPORATE SOURCE: Institut für Medizinische Physik und Biophysik, Martin-Luther-Universität, Halle, 06097, Germany  
 SOURCE: Chemistry and Physics of Lipids (2002), 117(1-2), 19-27  
 CODEN: CPLIA4; ISSN: 0009-3084  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The large intrinsic membrane dipole potential,  $\Phi_d$ , is important for protein insertion and functioning as well as for ion transport across natural and model membranes. However, the origin of  $\Phi_d$  is controversial. From expts. carried out with lipid monolayers, a significant dependence on the fatty acid chain length is suggested, whereas in expts. with lipid bilayers, the contribution of addnl. -CH<sub>2</sub>-groups seems negligibly small compared with that of the phospholipid carbonyl groups and lipid-bound water mols. To compare the impact of the -CH<sub>2</sub>-groups of dipalmitoylphosphatidylcholine (DPPC) near and far from the glycerol backbone, the authors have varied the structure of DPPC by incorporation of sulfur atoms in place of methylene groups in different positions of the fatty acid chain. The  $\Phi_d$  of sym. lipid bilayers containing one heteroatom was obtained from the charge relaxation of oppositely charged hydrophobic ions. The authors have found that the substitution for a S-atom of a -CH<sub>2</sub>-group decreases  $\Phi_d$ . The effect ( $\Delta\Phi_d$  = 22.6 mV) is most pronounced for S-atoms near the lipid head group while a S-atom substitution in the C13- or C14-position of the hydrocarbon chain does not effect the bilayer dipole potential. Most probably  $\Delta\Phi_d$  does not originate from an altered dipole potential of the acyl chain containing an heteroatom but is mediated by the disruption of chain packing, leading to a decreased d. of lipid dipoles in the membrane.  
 IT 478690-35-6 478690-37-8 478690-39-0  
 478690-41-4 478690-43-6  
 RL: PRP (Properties)  
 (phospholipid fatty acid chain methylene groups effect on membrane dipole potential)  
 RN 478690-35-6 CAPLUS  
 CN 3,5,8-Trioxo-11-thia-4-phosphatetracosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-7-[[1-(1-oxohexadecyl)oxy]methyl]-, inner salt, 4-oxide, (7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



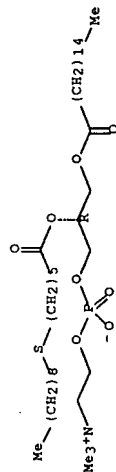
RN 478690-37-8 CAPIUS  
CN 3,5,8-Trioxa-12-thia-4-phosphatetracosan-1-aminium,  
4-hydroxy-N,N,N-trimethyl-9-oxo-7-[[[(1-oxohexadecyl)oxy]methyl]]-,  
inner salt, 4-oxide, (7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



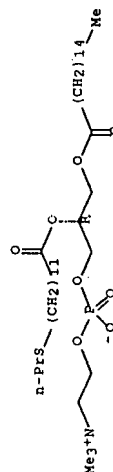
RN 478690-39-0 CAPIUS  
CN 3,5,8-Trioxa-15-thia-4-phosphatetracosan-1-aminium,  
4-hydroxy-N,N,N-trimethyl-9-oxo-7-[[[(1-oxohexadecyl)oxy]methyl]]-,  
inner salt, 4-oxide, (7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



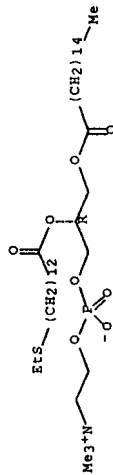
RN 478690-41-4 CAPIUS  
CN 3,5,8-Trioxa-21-thia-4-phosphatetracosan-1-aminium,  
4-hydroxy-N,N,N-trimethyl-9-oxo-7-[[[(1-oxohexadecyl)oxy]methyl]]-,  
inner salt, 4-oxide, (7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 478690-43-6 CAPIUS  
CN 3,5,8-Trioxa-22-thia-4-phosphatetracosan-1-aminium,  
4-hydroxy-N,N,N-trimethyl-9-oxo-7-[[[(1-oxohexadecyl)oxy]methyl]]-,  
inner salt, 4-oxide, (7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



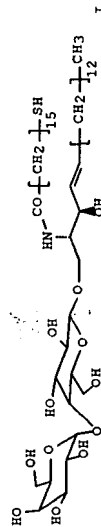
REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L7 ANSWER 7 OF 16 CAPIUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1999:180690 CAPIUS Full-text  
DOCUMENT NUMBER: 130:252555  
TITLE: ω-Mercapto analogs of naturally occurring  
lipids

AUTHOR(S): Ohlsson, Jorgen; Magnusson, Goran  
CORPORATE SOURCE: Organic Chemistry 2, Center for Chemistry and  
Chemical Engineering, Lund University, Lund,  
SE-221 00, Sweden.

SOURCE: Tetrahedron Letters (1999), 40(10), 2011-2014  
CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
GI



AB Analogs of natural lipids, where one of the alkyl chains carries a terminal  
thiol functionality, were prepared by N- or O-acylation of sphingosine or  
monoacylglycerol deriva., resp., thus creating lipid mimics, e.g. 1, suitable  
for anchoring to gold surfaces.

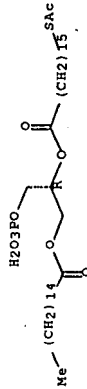
IT 221623-70-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)

(preparation of ω-mercapto analogs of naturally occurring lipids  
and glycolipids)

RN 221623-70-7 CAPIUS  
CN Hexadecanoic acid, 16-(acetylthio)-, (1R)-1-[[[(1-oxohexadecyl)oxy]methyl]-2-(phosphonoxy)ethyl ester (9CI) (CA INDEX

NAME)

Absolute stereochemistry.



REFERENCE COUNT:

17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 8 OF 16 CAPIUS. COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:692877 CAPIUS Full-text

DOCUMENT NUMBER: 126:47447

TITLE: Microstructure formation properties of 1,2-bis(15-thia-pentacosyl-10,12-diynyl)-sn-3-phosphocholine: an acyl chain modified diacytylenic phospholipid

AUTHOR(S): Markowitz, Michael A.; Singh, Alok  
CORPORATE SOURCE: Laboratory for Molecular Interactions, Code 6930, Center for Bio/Molecular Science and Engineering, Naval Research Laboratory, Washington, USA

SOURCE: Chemistry and Physics of Lipids (1996), 84(1), 65-74

CODEN: CPLI44; ISSN: 0009-3084

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB An acyl chain modified diacytylenic phospholipid containing a sulfur beta to the diacytylene, 1,2-bis(15-thia-pentacosyl-10,12-diynyl)-sn-3-phosphocholine, was synthesized. Comparisons of the UV spectra of the lipid, the diacytylenic carboxylic acid precursor, and the unmodified diacytylenic lipid 1,2-bis(tricosyl-10,12-diynyl)-sn-3-phosphocholine reveal that the sulfur acts as an auxochrome resulting in bathochromic shifts and higher intensities for the absorption peaks. Differential scanning calorimetry was used to determine the acyl chain melting transition temps. of 1,2-bis(15-thia-pentacosyl-10,12-diynyl)-sn-3-phosphocholine in water (31.2 °C) and 70:30 ethanol:water mixture (28.7 °C) and revealed that the lipid packed more homogeneously in the ethanol:water mixture. Subsequent dispersal of the lipid in water produced ribbons with diams. ranging from 0.01-0.1 µm while dispersal in 70:30 ethanol:water leads to formation of tubules with diams. ranging from 0.6-0.8 µm. A gel comprised of interwoven ribbons was formed from an equimolar mixture of the lipid and 1,2-bis(monoyl)-sn-glycero-3-phosphocholine (INPC) in 0.1 M aqueous NaCl.

IT 185059-68-1P

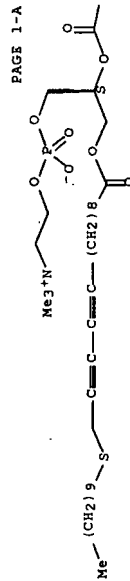
RL: PREP (Properties); SPN (Synthetic preparation); PREP (Preparation) (microstructure formation properties of bis(thiapentacosadiynyl)phosphocholine)

RN 185059-68-1 CAPIUS

CN 3,5,9-Trioxa-24-thia-4-phosphatetriaconta-19,21-diyn-1-aminium, 7-[(14-(decylthio)-1-oxo-10,12-tetradecadiynyl]oxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide, (S)- (9CI) (CA INDEX NAME)

17

Absolute stereochemistry.



PAGE 1-B



L7 ANSWER 9 OF 16 CAPIUS. COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:502549 CAPIUS Full-text

DOCUMENT NUMBER: 123:56493

TITLE: Synthesis of glycerophospholipid oligodeoxyribonucleotide conjugates

AUTHOR(S): Vinogradov, Serguei V.; Le Doan, Trung; Helene, Claude

CORPORATE SOURCE: Centre Biophysique Moleculaire, CNRS, Orleans, 45071, Fr.

SOURCE: Tetrahedron Letters (1995), 36(14), 2493-6

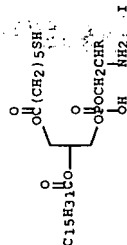
CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB Chemical synthesis of modified glycerophospholipids I (R = H, CO2H) and their attachment to oligodeoxyribonucleotides via dithio linker is described.

IT 164733-08-8P 164733-09-9P 164733-10-2P

164733-11-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT (Reactant or reagent)

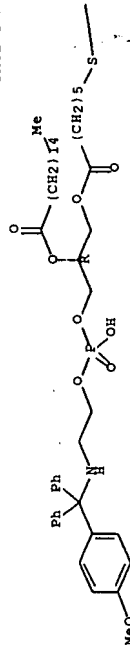
(synthesis of glycerophospholipid dithio-linked oligodeoxyribonucleotide conjugates)

18

RN 164733-08-8 CAPLUS  
 CN Hexadecanoic acid, 4-hydroxy-9-[(4-methoxyphenyl)-4-oxido-1-[[[1-oxo-6-[[[triphenylmethyl]thio]hexyl]oxy]methyl]-9,9-diphenyl]-3,5-dioxa-8-aza-4-phosphanon-1-yl ester, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

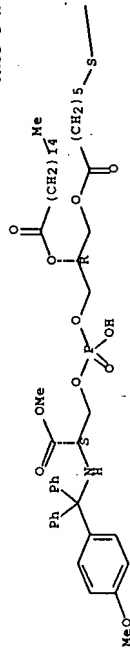


-CPh3

RN 164733-09-9 CAPLUS  
 CN 9,13,15-Trioxa-2-thia-14-phosphaoctadecan-18-oic acid, 14-hydroxy-17-[[[(4-methoxyphenyl)diphenylmethyl]amino]-8-oxo-11-[[[1-oxohexadecyl]oxy]-1,1,1-triphenyl]-, methyl ester, 14-oxide, [R-(R\*,S\*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



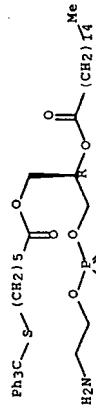
-CPh3

RN 164733-10-2 CAPLUS

19

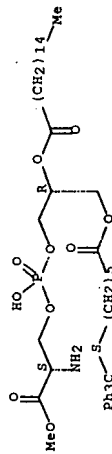
CN Hexadecanoic acid, 1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-2-[[[1-oxo-6-[[[triphenylmethyl]thio]hexyl]oxy]hexyl]oxy]ethyl ester, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 164733-11-3 CAPLUS  
 CN 9,13,15-Trioxa-2-thia-14-phosphaoctadecan-18-oic acid, 17-amino-14-hydroxy-8-oxo-11-[[[1-oxohexadecyl]oxy]-1,1,1-triphenyl]-, methyl ester, 14-oxide, [R-(R\*,S\*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L7 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1993:490647 CAPLUS Full-text  
 DOCUMENT NUMBER: 119:90647  
 TITLE: Design, synthesis, and properties of a photoactivatable membrane-spanning phospholipidic probe

AUTHOR(S): Delfino, Jose M.; Schreiber, Stuart L.; Richards, Frederic M.  
 CORPORATE SOURCE: Dep. Mol. Biophys. Blochem., Yale Univ., New Haven, CT, 06511, USA  
 SOURCE: Journal of the American Chemical Society (1993), 115(9), 3458-74  
 CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI

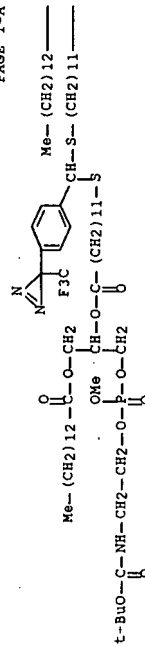


ethylphenyldiazirine (I). This is a dipolar phospholipid provided with a covalently bonded chain designed to span the membrane and equipped with a centrally defined attachment point for the photolabeling group (trifluoromethylphenyldiazirine (TPD). This mol. was designed to enhance the geometrical resolution of photochem. labeling of membrane proteins by locating the photoreactive functionality in the center of the bilayer. The remarkable chemical stability of the photoreactive group TPD allowed the design of a straightforward and convergent synthetic strategy. The key steps developed for mols. of this new general kind are (a) the mild and efficient coupling of 2 moieties of N-tBOC-protected lysophosphatidylethanolamine Me ester to the photoreactive sym. dicarboxylic fatty acid mediated by dicyclohexylcarbodiimide and (dimethylamino)pyridine and (b) the smooth deprotection of the phosphate and amino functionalities with sodium iodide and trifluoroacetic acid, resp., to yield the final product. I was successfully incorporated into small and large unilamellar vesicles of different lipid composition and prepared by a variety of procedures. The bilayer location of this reagent (transmembrane vs U-shaped conformations) was assayed by reaction of the amino groups at the polar heads of the bipolar phospholipid with selected membrane-impermeable reagents. Photolysis of the probe incorporated into vesicles occurs readily upon irradiation with UV light (near 360 nm). These loaded vesicles show adequate stability and appear uniform and unilamellar in electron micrographs. They undergo the fusion reaction with influenza virus as efficiently as reagent-free vesicles. Evidence is presented here that I and a reductively methylated form efficiently label the peptide ion channel form of gramicidin A (and a chemical analog) and the influenza virus hemagglutinin. I may help to identify transmembrane regions of integral membrane proteins and map the lipid-protein interface in a region known to be deep in the membrane. A new radioactive version of this reagent ([3H]-I has been recently used to ascertain that the HA2 subunit of influenza virus hemagglutinin inserts into the target membrane prior to fusion.

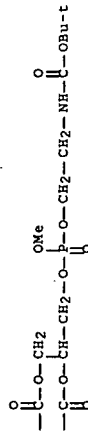
IT 149183-58-4P 149203-93-0P  
 RL: PREP (Preparation)  
 (Preparation and demethylation from phosphotriester group with sodium iodide of)

RN 149183-58-4 CAPLUS  
 CN 5,7,10,38,41,43-Hexaoxa-23,25-dithia-2,46-diaza-6,42-diphosphahexatetracontanedioic acid, 6,42-dimethoxy-11,37-dioxo-9,39-bis[[(1-oxotetradecyl)oxy]methyl]-24-phenyl-, bis[(1,1-dimethylethyl)-3-yl]phenyl-, bis[(1,1-dimethylethyl) ester, 6,42-dioxide, [9R-(9R\*,39R\*)]- (9CI) (CA INDEX NAME)

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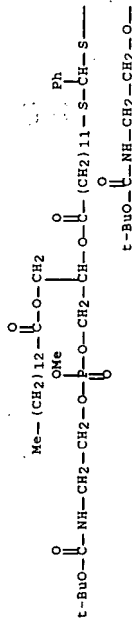


PAGE 1-B

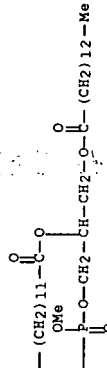


RN 149203-93-0 CAPLUS  
 CN 5,7,10,38,41,43-Hexaoxa-23,25-dithia-2,46-diaza-6,42-diphosphahexatetracontanedioic acid, 6,42-dimethoxy-11,37-dioxo-9,39-bis[[(1-oxotetradecyl)oxy]methyl]-24-phenyl-, bis[(1,1-dimethylethyl) ester, 6,42-dioxide, [9R-(9R\*,39R\*)]- (9CI) (CA INDEX NAME)

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PAGE 1-B

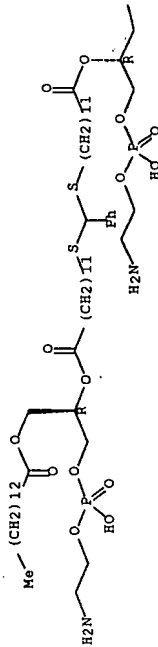


IT 113297-40-8P 149203-95-2P  
 RL: PREP (Preparation)  
 (Preparation and properties, as membrane-spanning phospholipid probe)  
 RN 113297-40-8 CAPLUS  
 CN 3,5,8-Trioxa-21,23-dithia-4-phosphapentatriacontan-35-oic acid, 1-amino-4-hydroxy-9-oxo-7-[[[(1-oxotetradecyl)oxy]methyl]-22-phenyl-, 1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-2-[[[(1-oxotetradecyl)oxy]ethyl ester, 4-oxide, [R-(R\*,R\*)]- (9CI) (CA INDEX NAME)

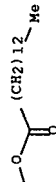
Absolute stereochemistry.



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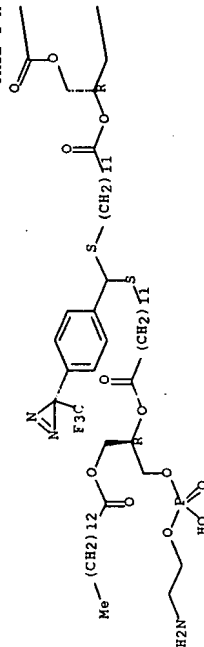
PAGE 1-B



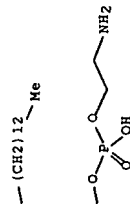
RN 149203-95-2 CAPIUS  
 CN 3,5,8-Trioxo-21,23-dithia-4-phosphapentatriacontan-35-oic acid,  
 1-amino-4-hydroxy-9-oxo-7-[[[(1-oxotetradecyl)oxy]methyl]-22-[4-{3-  
 (trifluoromethyl)-3H-diazirin-3-yl}phenyl]-, 1-[[[(2-  
 aminoethoxy)hydroxyphosphinyl]oxy]methyl]-2-[(1-  
 oxotetradecyl)oxy]ethyl ester, 4-oxide, [R-(R\*,R\*)]- (9CI) (CA INDEX  
 NAME)

Absolute stereochemistry.

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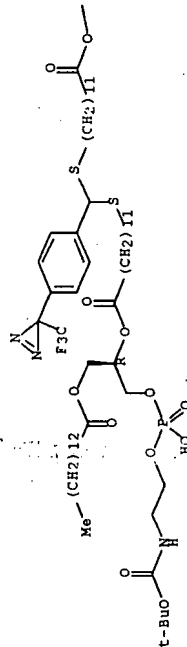
PAGE 1-B



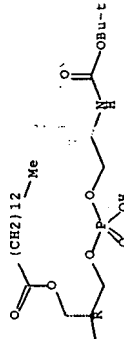
IT 149203-94-1P 149226-61-9P  
 RL: PREP (Preparation)  
 (Preparation of and tertiary butoxycarbonyl group removal from)  
 RN 149203-94-1 CAPIUS  
 CN 5,7,10,38,41,43-Hexaoxa-23,25-dithia-6,42-  
 diphosphapentatriacontanedioic acid, 6,42-dihydroxy-9,39-bis[[[(1-  
 oxotetradecyl)oxy]methyl]-24-[4-{3-(trifluoromethyl)-3H-diazirin-3-  
 yl}phenyl]-, bis[(1,1-dimethylethyl) ester, 6,42-dioxide, [R-(R\*,R\*)]-  
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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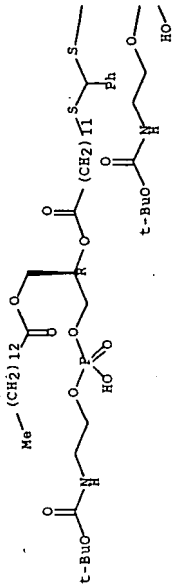
PAGE 1-B



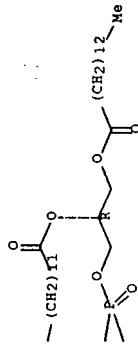
RN 149226-61-9 CAPIUS  
 CN 5,7,10,38,41,43-Hexaoxa-23,25-dithia-2,46-diaza-6,42-  
 diphosphapentatriacontanedioic acid, 6,42-dihydroxy-11,37-dioxo-9,39-  
 bis[[[(1-oxotetradecyl)oxy]methyl]-24-phenyl]-, bis[(1,1-dimethylethyl)  
 ester, 6,42-dioxide, [R-(R\*,R\*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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IT 149204-00-2P 149204-01-3P 149204-02-4P

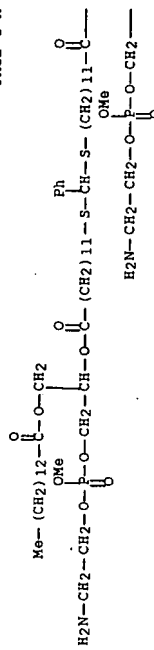
RL: PREP (Preparation)

phenyldiazirine derivative as membrane-spanning probe in relation to)

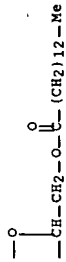
RN 149204-00-2 CAPLUS

CN 3,5,8-Trioxa-21,23-dithia-4-phosphapentatriacontan-35-oic acid, 1-amino-4-methoxy-9-oxo-7-[[[(1-oxotetradecyl)oxy]methyl]-22-phenyl-, 1-[[[(2-aminoethoxy)methoxy]phosphinyl]oxy]methyl]-2-[[[(1-oxotetradecyl)oxy]ethyl ester, 4-oxide, [7R-{7R\*,35(1R\*)}]]- (9CI) (CA INDEX NAME)

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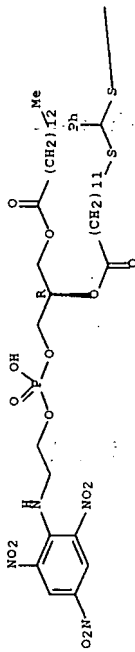


RN 149204-01-3 CAPLUS

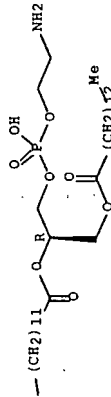
CN 3,5,8-Trioxa-21,23-dithia-4-phosphapentatriacontan-35-oic acid, 1-amino-4-hydroxy-9-oxo-7-[[[(1-oxotetradecyl)oxy]methyl]-22-phenyl-, 1-[[[(hydroxy[2-[[2,4,6-trinitrophenyl]amino]ethoxy]phosphinyl]oxy]methyl]-2-[[[(1-oxotetradecyl)oxy]ethyl ester, 4-oxide, [R-{R\*,R\*}]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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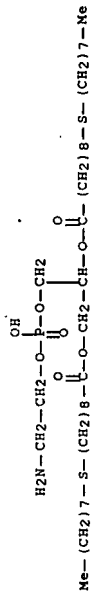


RN 149204-02-4 CAPLUS

CN 3,5,8-Trioxa-21,23-dithia-4-phosphapentatriacontan-35-oic acid, 4-hydroxy-9-oxo-7-[[[(1-oxotetradecyl)oxy]methyl]-22-phenyl-1-[[2,4,6-trinitrophenyl]amino]-, 1-[[[(hydroxy[2-[[2,4,6-trinitrophenyl]amino]ethoxy]phosphinyl]oxy]methyl]-2-[[[(1-oxotetradecyl)oxy]ethyl ester, 4-oxide, [R-{R\*,R\*}]]- (9CI) (CA INDEX NAME)

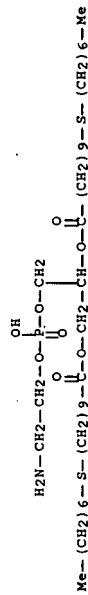
Absolute stereochemistry.





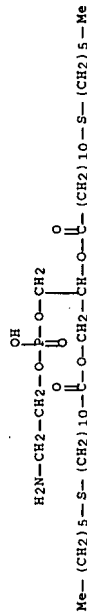
RN 147071-26-9 CAPLUS

CN Decanoic acid, 10-(heptylthio)-, 1-(((2-aminoethoxy)hydroxyphosphinyl)oxy)methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)



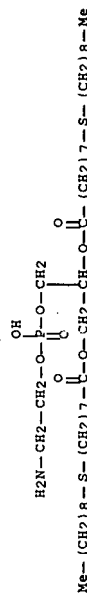
RN 147071-27-0 CAPLUS

CN Undecanoic acid, 11-(hexylthio)-, 1-(((2-aminoethoxy)hydroxyphosphinyl)oxy)methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)



RN 148693-65-6 CAPLUS

CN Octanoic acid, 8-(nonylthio)-, 1-(((2-aminoethoxy)hydroxyphosphinyl)oxy)methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)



L7 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1990:420466 CAPLUS

DOCUMENT NUMBER: 113:20466

TITLE: Interactions of mammalian cells with lipid

dispersions containing novel metabolizable

cationic amphiphiles

Leventis, Rania; Silvius, John R.

CORPORATE SOURCE: Dep. Biochem., McGill Univ., Montreal, QC, H3G

1V6, Can.

SOURCE: Biochimica et Biophysica Acta, Biomembranes

(1990), 1023(1), 124-32

CODEN: BBEMES; ISSN: 0005-2736

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Several novel cationic amphiphiles, based on a hydrophobic cholesteryl or dioleoylglyceryl moiety, have been prepared whose hydrophobic and cationic

portions are linked by ester bonds to facilitate efficient degradation in

animal cells. Dispersions combining such cationic species with

phosphatidylethanolamine (PE), certain structural analogs of PE or

diacylglycerol can mediate efficient transfer of both nonexchangeable lipid

probes and the DNA plasmid pSV2cat into cultured mammalian (CV-1 and 3T3)

cells. The abilities of different types of cationic lipid dispersions to

mediate transfection of mammalian cells with pSV2cat could not be directly

correlated with their abilities to coalesce with other membranes, as assessed

by their ability to intermix lipids efficiently with large unilamellar

phosphatidylcholine/phosphatidylserine vesicles in the presence or absence of

DNA. The cytotoxicities toward CV-1 cells of dispersions combining PE with

most of the degradable cationic amphiphiles studied here compare favorably

with those reported previously for similar dispersions containing other types

of cationic amphiphiles. Fluorescent analogs of 2 of the diacylglycerol-based

cationic amphiphiles examined in this study are readily degraded after

incorporation into CV-1 cells from PE/cationic lipid dispersions.

IT 108535-71-3

RI: ANST (Analytical study)

(palmitoylstearyl)glycerol derivative and homostearyl

phosphatidylcholine derivative preparation from)

RN 108535-71-3 CAPLUS

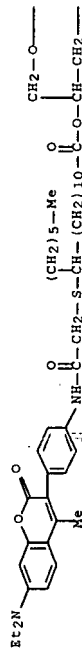
CN 3,5,8-Trioxo-21-thia-4-phosphatricosan-1-aminium, 23-[[[4-(7-

(diethylamino)-4-methyl-2-oxo-2H-1-benzopyran-3-yl]phenyl]amino]-20-

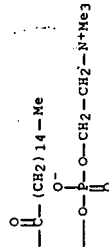
hexyl-4-hydroxy-N,N-trimethyl-9,23-dioxo-7-[[[1-oxo-1-

hexadecyl]oxy]methyl]-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

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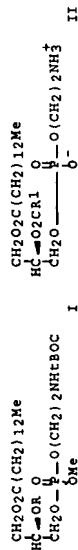
L7 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1988:167843 CAPLUS

DOCUMENT NUMBER: 108:167843

TITLE: An efficient method for the partial synthesis of

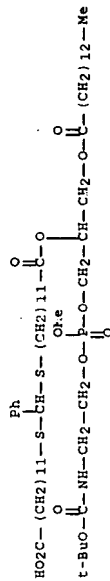
mixed-chain phosphatidylethanolamines  
Delfino, Jose M.; Schreiber, Stuart L.; Richards,  
Frederic M.  
CORPORATE SOURCE: Sterling Chem. Lab., Yale Univ., New Haven, CT,  
06520, USA  
SOURCE: Tetrahedron Letters (1987), 28(21), 2327-30  
CODEN: TELEAY; ISSN: 0040-4039  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 108:167843



A key step in the title synthesis was the acylation of myristylphosphatidylethanolamine I ( $R = H$ ) with  $RCO_2H$  [ $R = (CH_2)_{3Me}$ ,  $(CH_2)_{12Me}$ ,  $(CH_2)_{12CO_2H}$ ,  $Z-(CH_2)_{17}CH:CH(CH_2)_{7Me}$ ,  $Z-(CH_2)_{17}CH:CHCH_2CH:CH(CH_2)_{4Me}$ ] in the presence of DCC and DMAP to give 79-84<sup>4</sup> esters I ( $R = RCOO$ ). The latter were deprotected with NaI in 2-butanone followed by  $CF_3CO_2H$  in  $CH_2Cl_2$  to give the title compds. II.

113788-14-0P  
 RU: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent);  
 (preparation and deprotection of)

113788-14-0 CAPLUS  
5,7,10-Trioxo-23,25-dithia-2-aza-6-phosphahexatriacontanoic acid,  
6-methyl-11-oxo-9-[[[(3-oxotetradecyloxy)methyl]-24-phenyl-  
1-(1,1-dimethylethyl) ester, 6-oxide (9CI) (CA INDEX NAME)



IT	113788-20-6P	RU: SPN (Synthetic preparation); PREP (Preparation)
	(preparation of)	
RN	113788-20-8 CAPLUS	
QN	3,5,8-Tricosa-21,23-dithia-4-phosphorotriacontan-35-oic acid, 1-amino-4-hydroxy-9-oxo-7-[[[1-oxotetradecyloxy]methyl]-22-phenyl]- 4-oxide (9CI) (CA INDEX NAME)	

A general strategy for the synthesis of membrane-spanning bipolar phospholipids equipped with a reactive functional group probe of the membrane environment is described. The strategy is exemplified by the synthesis of a bisphosphatidylethanolamine I that is connected through a benzylidene thioacetal of the  $\omega$ -hydroxy esters at the sn-2 position of the two phosphoglycerol termini.

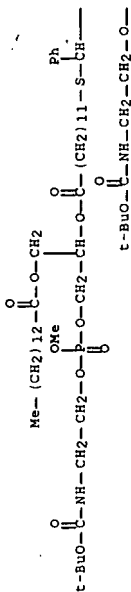
IT 113297-39-5P  
ПРОПРИУТОГО СЕРВИСА,

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)

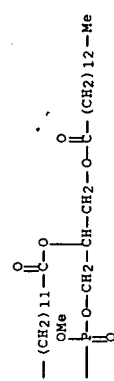
(preparation and deprotection of)

113297-39-5 CAPLUS  
5,7,10,37,40,42-Hexaoxa-23-thia-2,45-diaza-6,41-diphosphahexatetracontanedioic acid, 6,41-dimethylbis[[1-oxotetradecyl)oxymethyl]-24-phenyl]-, bis-

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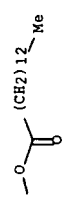
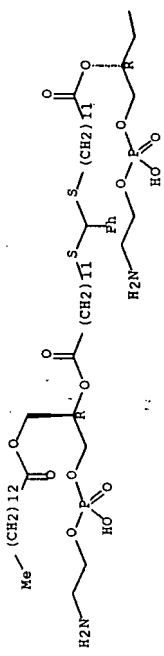
PAGE 1-B



IT 113297-40-8P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 113297-40-8 CAPLUS  
CN 3,5,8-Trioxa-21,23-dithia-4-phosphapentatriacontan-35-olic acid,  
1-amino-4-hydroxy-9-oxo-7-[[[(1-oxotetradecyl)oxylmethyl]-22-phenyl]-,  
1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxylmethyl]-2-[[[(1-oxotetradecyl)oxylmethyl]ester, 4-oxide, [R-(R\*,R\*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



L7 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2007 ACS on STR  
ACCESSION NUMBER: 1987:435098 CAPLUS Full-text  
DOCUMENT NUMBER: 107:55098  
TITLE: Novel fluorescent phospholipids for assays of lipid mixing between membranes  
AUTHOR(S): Silvius, John R.; Leventis, Rania; Brown, Pamela  
M.; Zuckermann, Martin  
CORPORATE SOURCE: Dep. Biochem., McGill Univ., Montreal, QC, H3G 1Y6, Can.  
SOURCE: Biochemistry (1987), 26(14), 4279-87  
CODEN: BICHAU; ISSN: 0006-2960

DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB A series of fluorescent phospholipids has been synthesized, by a general and versatile procedure, with various fluorescent groups attached to the methyl-terminal half of 1 acyl chain in an otherwise normal phospholipid structure. Phospholipids labeled with (dialkylamino)coumarin moieties, and to a slightly lesser extent those labeled with a bimane group, exhibit a strong and stable blue fluorescence in phospholipid dispersions that is relatively insensitive to the phys. state of the lipid phase. The fluorescence of these labeled phospholipids is efficiently quenched by resonance energy transfer to lipids labeled with a [[[(dimethylamino)phenyl]azo]p henyl or a methyl(nitrobenzoxadiazolyl)amino group when these acceptors are incorporated into the same bilayer as the donor species. Acyl chain-labeled phospholipid probes, both of whose chains are at least 16 carbons in length, exchange extremely slowly between lipid vesicles (<1% exchange/h). These properties allow various donor-acceptor combinations of probes to be employed in sensitive and reliable assays of lipid mixing accompanying membrane fusion. In 2 particularly demanding applications (assays of the Ca-mediated coalescence of phosphatidylserine vesicles and of the proton-triggered coalescence of phosphatidylethanolamine vesicles), some combinations of acyl chain-labeled probes offer substantial advantages over the commonly used N-(7-nitrobenz-2-oxa-1,3-diazol-4-yl)phosphatidylethanolamine/N-(lissamine rhodamine B sulfonyl)phosphatidylethanolamine pair to monitor accurately the progress of lipid mixing between vesicles.  
IT 108535-71-3 108535-73-5 108535-74-6  
RL: PRP (Properties)  
(fluorescence of, in phospholipid vesicles, lipid mixing between membranes study in relation to)  
RN 108535-71-3 CAPLUS  
CN 3,5,8-Trioxa-21-thia-4-phosphatricosan-1-aminium, 23-[[[4-{7-(diethylamino)-4-methyl-2-oxo-2H-1-benzopyran-3-yl]phenyl]amino]-20-hexyl-4-hydroxy-N,N-trimethyl-9,23-dioxo-7-[[[(1-oxo-1-hexadecyl)oxylmethyl]-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



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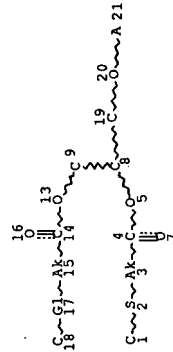
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NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

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NSPEC IS RC AT 21

CONNECT IS X2 RC AT 9

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DEFAULT ELEVEL IS LIMITED

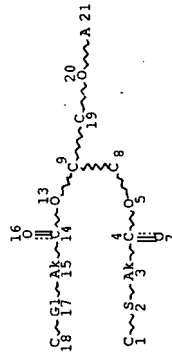
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RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L4 STR



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CONNECT IS X2 RC AT 8

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DEFAULT ELEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L5 109 SEA FILE=REGISTRY SUB=L2 SSS FUL (L3 OR L4)

(FILE 'CAPIUS' ENTERED AT 15:38:15 ON 22 JUN 2007)

L10 39 S 15

L11 23 S L10 NOT L7

L12 18 S L11 AND PATENT/DT

L13 15 S L12 AND (PY<2002 OR AY<2002 OR PRY<2002)

L14 5 S L11 NOT L12

L15 1 S L14 NOT PY<2002

L16 16 S L13 OR L15

=> sel l16 1-16 hit rn

E1 THROUGH E38 ASSIGNED

L16 ANSWER 1 OF 16 CAPIUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 20061327112 CAPIUS Full-text

DOCUMENT NUMBER: 146:252028

TITLE: Synthesis of Boron Cluster Lipids:

closo-Dodecaborate as an Alternative Hydrophilic

Function of Boronated Liposomes for Neutron

Capture Therapy

AUTHOR(S): Lee, Jong-Dae; Ueno, Manabu; Miyajima, Yusuke;

Corporate Source: Nakamura, Hiroyuki

Department of Chemistry, Faculty of Science,

Gakushuin University, Mejiro, Toshima-ku, Tokyo,

171-8588, Japan

SOURCE: Organic Letters (2007), 9(2), 323-326

CODEN: ORLEF7; ISSN: 1523-7060

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 146:252028

AB We succeeded in the synthesis of the double-tailed boron cluster lipids 4a-c

and 5a-c, which have a B12H12 moiety as a hydrophilic function, by S-

alkylation of B12H12 (BSH) with bromoacetyl and chloroacetate deriva-

of diacylglycerols for a liposomal boron delivery system on neutron capture

therapy. Calcein encapsulation expts. revealed that the liposomes, prepared

from the boron cluster lipid 4b, DMPC, PEG-DSPE, and cholesterol, are stable

at 37 °C in PBS solution for 24 h.

IT 925698-19-7P 925698-21-1P 925698-23-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT (Reactant or reagent)

(synthesis of boron cluster lipids: closo-dodecaborate as an

alternative hydrophilic function of boronated liposomes for neutron

capture therapy)

RN 925698-19-7 CAPIUS

CN INDEX NAME NOT YET ASSIGNED

C4 1

CRN 925698-18-6

CHF C36 H76 B12 N O6 S

CCI RIS

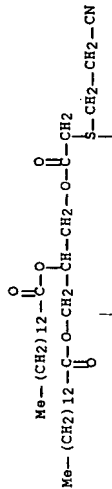
Ans. set limited to patent/non-patent docs. dated prior to 2002



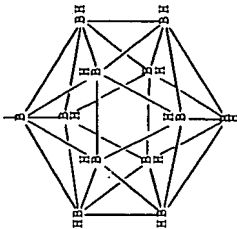
PAGE 1-A

CRN 925698-20-0  
CMF C40 H84 B12 N O6 S  
CCI RIS

PAGE 1-A

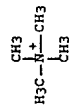


PAGE 2-A



CM 2

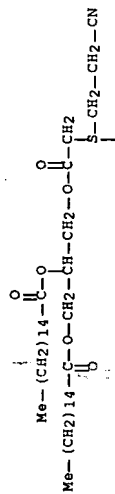
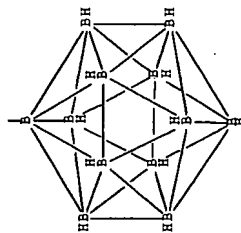
CRN 51-92-3  
CMF C4 H12 N



RN 925698-21-1 CAPLUS  
CN INDEX NAME NOT YET ASSIGNED

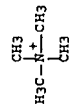
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PAGE 2-A



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CMF C4 H12 N

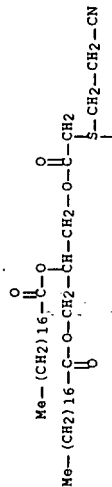


RN 925698-23-3 CAPLUS  
CN INDEX NAME NOT YET ASSIGNED

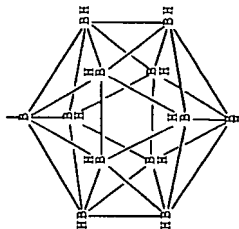
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CRN 925698-22-2  
CMF C44 H92 B12 N O6 S  
CCI RIS

PAGE 1-A

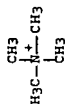


PAGE 2-A



CM 2

CRN 51-92-3  
CMF C4 H12 N



REFERENCE COUNT:

33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN  
2003:133230 CAPLUS Full-text

ACCESSION NUMBER:

138:175891

DOCUMENT NUMBER:

TITLE:

Fatty acid compounds, preparations, and uses thereof

INVENTOR(S):

Nejib-Fruchart, Jamila; Caumont-Bertrand, Karine

PATENT ASSIGNEE(S):

Genfit, Fr.

SOURCE:

PCT Int. Appl., 110 pp.

DOCUMENT TYPE:

CODEN: PIXXD2

LANGUAGE:

Patent

FAMILY ACC. NUM. COUNT:

French

PATENT INFORMATION:

1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003014073	A1	20030220	WO 2002-FR2831	20020808
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
FR 2828487	A1	20030214	FR 2001-10645	20010809
FR 2828487	B1	20050527		
CA 2456288	A1	20030220	CA 2002-2456288	20020808
AU 2002342968	A1	20030224	AU 2002-342968	20020808
JP 2004537595	T	20041216	JP 2003-519023	20020808
EP 1673338	A1	20060628	EP 2002-779622	20020808
US 2004192908	A1	20040930	US 2004-484350	20040121
PRIORITY APPLN. INFO.:				
FR 2001-10645 A 20010809				
WO 2002-FR2831 W 20020808				

OTHER SOURCE(S):

MARPAT 138:175891

AB The invention concerns novel mols., their preparation and their uses, in particular in the field of human and veterinary medicine and in cosmetics. The inventive compds. are partly fatty acid derivs. and exhibit advantageous

pharmacol. and cosmetic properties. The invention also concerns various uses of said compds., the pharmaceutical compns. containing them and methods for preparing them. The inventive compds. are useful in particular for preventing and/or treating dyslipidemias, cardiovascular diseases, syndrome X, restenosis, diabetes, obesity, hypertension, certain cancers, dermatol. diseases, and in cosmetics for fighting against skin aging and its effects notably against wrinkles and the like.

IT 31716-45-7P 497263-29-3P 497263-30-6P

497263-31-7P 497263-32-8P 497263-34-0P

497263-35-1P 497263-36-2P 497263-37-3P

497263-38-4P 497263-39-5P 497263-40-8P

497263-41-9P

RL: COS (Cosmetic use); SPN (Synthetic preparation); THU (Therapeutic

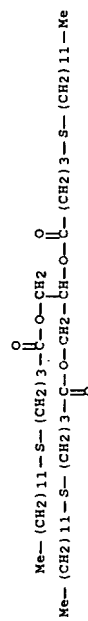
use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(fatty acid compds., preps., and uses thereof)

RN 31716-45-7 CAPLUS

CN Butanoic acid, 4-(dodecylthio)-, 1,2,3-propanetriyl ester (9CI) (CA

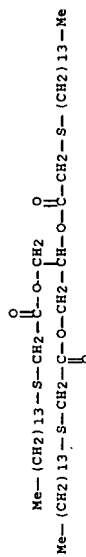
INDEX NAME)



RN 497263-29-3 CAPLUS

CN Acetic acid, (tetradecylthio)-, 1,2,3-propanetriyl ester (9CI) (CA

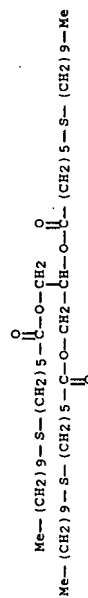
INDEX NAME)



RN 497263-30-6 CAPLUS

CN Hexanoic acid, 6-(decylthio)-, 1,2,3-propanetriyl ester (9CI) (CA

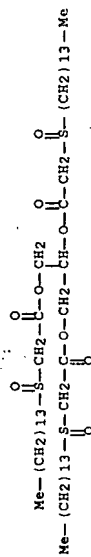
INDEX NAME)



RN 497263-31-7 CAPLUS

CN Acetic acid, (tetradecylsulfinyl)-, 1,2,3-propanetriyl ester (9CI)

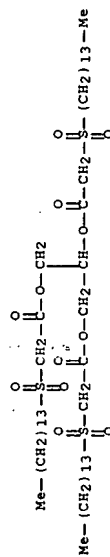
(CA INDEX NAME)



RN 497263-32-8 CAPLUS

CN Acetic acid, (tetradecylsulfonyl)-, 1,2,3-propanetriyl ester (9CI)

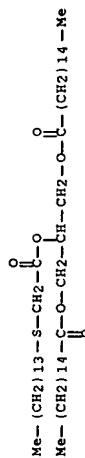
(CA INDEX NAME)



RN 497263-34-0 CAPLUS

CN Hexadecanoic acid, 2-[(tetradecylthio)acetyl]oxy]-1,3-propanediyl

ester (9CI) (CA INDEX NAME)



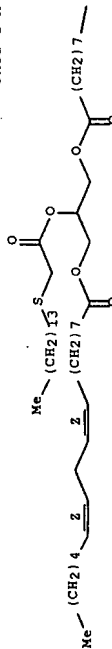
RN 497263-35-1 CAPLUS

CN 9,12-Octadecadienoic acid (9Z,12Z)-, 2-[(tetradecylthio)acetyl]oxy]-

1,3-propanediyl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.

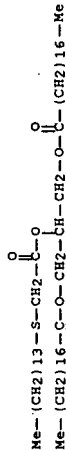
PAGE 1-A



PAGE 1-B



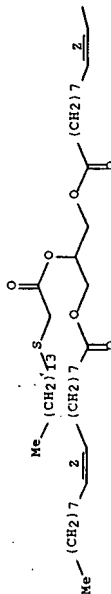
RN 497263-36-2 CAPIUS  
CN Octadecanoic acid, 2-(((tetradecylthio)acetyl)oxy)-1,3-propanediyl ester (9CI) (CA INDEX NAME)



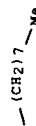
RN 497263-37-3 CAPIUS  
CN 9-Octadecenoic acid (9Z)-, 2-(((tetradecylthio)acetyl)oxy)-1,3-propanediyl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.

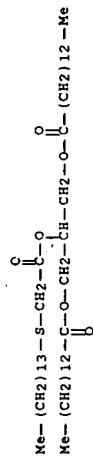
PAGE 1-A



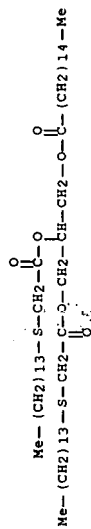
PAGE 1-B



RN 497263-38-4 CAPIUS  
CN Tetradecanoic acid, 2-(((tetradecylthio)acetyl)oxy)-1,3-propanediyl ester (9CI) (CA INDEX NAME)

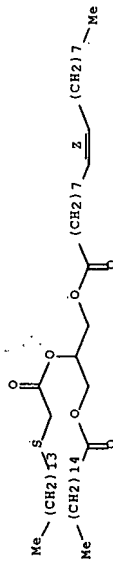


RN 497263-39-5 CAPIUS  
CN Hexadecanoic acid, 2-bis(((tetradecylthio)acetyl)oxy)propyl ester (9CI) (CA INDEX NAME)

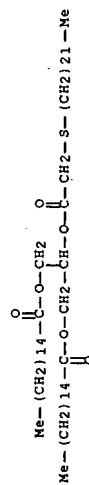


RN 497263-40-8 CAPIUS  
CN 9-Octadecenoic acid (9Z)-, 3-(((1-oxohexadecyl)oxy)-2-(((tetradecylthio)acetyl)oxy)propyl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 497263-41-9 CAPIUS  
CN Hexadecanoic acid, 2-(((docosylthio)acetyl)oxy)-1,3-propanediyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 3 OF 16 CAPIUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2001:63958 CAPIUS Full-text  
DOCUMENT NUMBER: 134:131810  
TITLE: Preparation of oligomeric amino acid derivatives useful as nitric oxide synthase inhibitors

## INVENTOR(S):

Webber, R. Keith; Reuppel, Melvin L.; Hansen, Donald W., Jr.; Hallinan, E. Ann; Hagen, Timothy J.; Pitzele, Barnett S.

## PATENT ASSIGNEE(S):

Monsanto Company, USA  
PCT Int. Appl., 311 pp.

## SOURCE:

CODEN: PIXXD2  
Patent  
English

## DOCUMENT TYPE:

English

## FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001005748	A1	20010125	WO 2000-US19373	20000714

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, FI, GB, GD, GE, GH, GM, GR, HU, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GM, GN, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-143867P P 19990715

AB Novel oligomeric amidino amino carboxylate derivs. [1a]f[1b]g[1c]h[1d]i [B is a linker group; f, g, h, and i are integers 0-5, with the proviso that the sum of f, g, h, and i must be at least two; 1a, 1b, 1c, and 1d are independently selected from a structure R<sup>3</sup>N:CYNR<sup>4</sup>-X-CR<sup>5</sup>(NR<sup>1</sup>R<sup>2</sup>)CJ<sup>1</sup>J<sup>2</sup>-A-R<sup>7</sup> attached to linker B by replacement of a substituent group; J<sup>1</sup>, J<sup>2</sup> = OH, alkoxy, SH, alkylthio, amino, alkylamino, etc.; A = O, imino group, S, heterocyclyl, etc.; R<sup>1</sup>, R<sup>2</sup> = H, hydroxyalkyl, aminoalkyl, alkyl, hetero, heterocyclyl, cycloalkyl, etc. or R<sup>1</sup>R<sup>2</sup>N may form a ring; R<sup>3</sup>, R<sup>4</sup> = H, OH, SH, alkoxy, alkylthio, CH<sub>2</sub>SO<sub>3</sub>-M<sup>+</sup>, CH<sub>2</sub>PO<sub>3</sub>-M<sup>+</sup> (M<sup>+</sup> is a pharmaceutically acceptable cation), etc. or R<sup>3</sup> and R<sup>4</sup> together form a group; R<sup>7</sup> = H, aryl, heteroalkyl, OH, alkyl, amino, etc.; R<sup>8</sup> = H, hydroxyalkyl, haloalkyl, alkyl, formyl, C(O)-A-R<sup>7</sup>, etc.; X = alkylene, alkenylene, alkynylene, (CH<sub>2</sub>)<sub>p</sub>-O-(CH<sub>2</sub>)<sub>r</sub>, where p = 1-3 and q = 0, CO, NHSO<sub>2</sub>, etc.; Y = alkyl, cycloalkyl, cycloalkenyl, alkylthioalkyl, etc. (with proviso)] were prepared as nitric oxide synthase inhibitors. 1,5-Bis[6-[(1-iminoethyl)amino]-2-amino-2-methylhexanamido]pentane tetrahydrochloride is one of thirty-two compds. claimed.

IT

321849-63-2P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of oligomeric amino acid derivs. useful as nitric oxide synthase inhibitors)

RN 321849-63-2 CAPLUS

CN L-Lysine, N6-(2-fluoro-1-iminoethyl)-, 4-[[[(2S)-2-amino-6-[[1-(hydroxyamino)ethylidene]amino]-1-oxohexyl]oxy]-2-[(2R)-2-amino-3-[[2-[[1-iminoethyl]amino]ethylthio]-1-oxopropoxy]-3-[[[(2S)-2-amino-6-[[1-iminoethyl]amino]-1-oxohexyl]oxy]butyl ester, octakis(4-methylbenzenesulfonate) (salt) (9CI) (CA INDEX NAME)

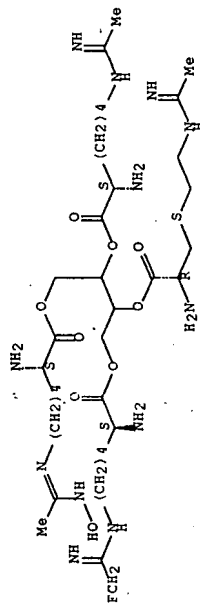
CM 1

CRN 321849-62-1

CMF C35 H67 F N12 O9 S

47

## Absolute stereochemistry.



CM 2

CRN 104-15-4

CMF C7 H8 O3 S



## REFERENCE COUNT: 2

THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:367983 CAPLUS Full-text

DOCUMENT NUMBER: 133:22412

TITLE: Cationic lipids for use liposomes for drug delivery

INVENTOR(S): Xiang, Gao

PATENT ASSIGNEE(S): Vanderbilt University, USA

SOURCE: PCT Int. Appl., 152 pp.

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000030444	A1	20000602	WO 1999-US27841	19991123
W: AU, CA, JP				
RW: AT, BE, CH, NL, PT, SE				
US 6656498	B1	20031202	US 1999-447688	19991123
US 2003049310	A1	20030313	US 2002-224706	20020820
US 7002042	B2	20060221		

48

## SSN 10/518427 Page 49 of 82 STIC STN SEARCH

US 2006057194	A1	20060316	US 2005-201496	20050811
US 7067697	B2	20060627	US 1998-109950P	19981125
PRIORITY APPLN. INFO.:			US 1998-110970P	19981204
			US 1999-447688	19991123
			US 2002-224706	20020820

OTHER SOURCE(S): MARPAT 133:22412

**AB** The present invention relates to synthetic cationic lipids, liposome formulations and the use of such compds. to introduce functional bioactive agents into cultured cells.

IT 272462-71-2H

URL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent)

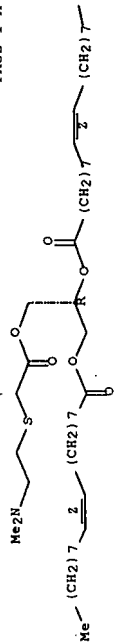
(pren. and reactions of; cationic lipids for use liposomes for drug delivery)

272462-71-2 CAPLUS

9-Octadecenoic acid (9Z)-, (1R)-1-[[[12-(dimethylamino)ethyl]thio]acetoxymethyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)

**Absolute stereochemistry.**

Double bond geometry as shown.



PAGE 1-A

PAGE 1-B

Me

REFERENCE COUNT:

THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 5 OF 16

ACCESSION NUMBER:	1996:326341	CAPIUS	Full-text
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DOCUMENT NUMBER: 125:17173

**TITLE:** Metal-silicon composite alkoxides and their manufacture for glass surface treatment

INVENTOR(S) :

PATENT ASSIGNEE(S):

Industries, Inc.

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

49

SN 10/518427 Page 50 of 82 STIC STN SEARCH

CODEN: JXXXXF					
DOCUMENT TYPE:	PATENT	KIND	DATE	APPLICATION NO.	DATE
LANGUAGE:	Japanese				
FAMILY ACC. NUM. COUNT:	1				
PATENT INFORMATION:					
		PATENT NO.			
		JP 08040722	A	19960213	19940728
					←--
		JP 3485273	B2	20040113	19940728
		PRIORITY APPL. INFO.:			
				JP 1994-195868	

OTHER SOURCE(S):  
MARPAT 125:17173

AB The alkoxides represent (R'O)4-nm[O(C)Q(Si)(Xa)(OR)3-a]n (M = Ti or Zr; R = alkyl; R' = C54 alkyl; Q = hydrocarbyl or S-containing divalent hydrocarbyl group; X = monovalent hydrocarbyl; a = 0-2 integer; n = 1 or 2). The alkoxides may be prepared from organosilicon compds.

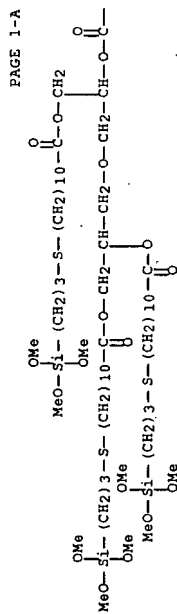
alkoxides may be prepared from organotin compounds:  $\text{O}[\text{C}(\text{O})\text{R}']\text{C}(\text{O})\text{OSi}(\text{Xa})(\text{OR})_3\text{a}$  and  $\text{M}(\text{OR}')_4$  ( $\text{R}' = \text{C}_5\text{H}_3\text{alkyl}$ ). The articles, especially suitable for primers, give titania or zirconia coatings with high wear resistance.

IT 170291-29-9P

RU: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (metal-silicon composite alkoxides for coating of titania or zirconia on glasses)

RN	170291-29-9	CAPLUS
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Undecanoic acid, 11-[[3-(trimethoxysilyl)propyl]thio]-, oxydi-3,1,2-propanetriyl ester (9CI) (CA INDEX NAME)



PAGE 1-A

PAGE 1-B



1116 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:228499 CAPLUS Full-text

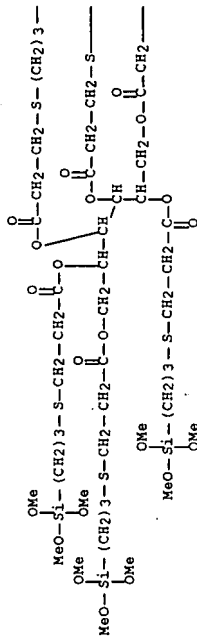
DOCUMENT NUMBER: 124:263548

TITLE: Alkali-resistant coating compositions

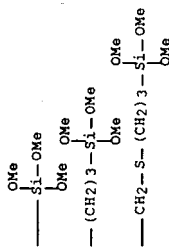
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PAGE 1-A



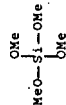
PAGE 1-B



CM 2

CBN 681-84-5

CMF C4 H12 O4 Si



IT 170291-29-9P 170291-30-2P 170291-32-4P

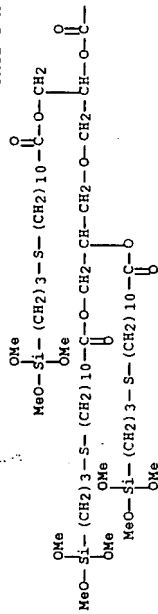
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);  
RACI (Reactant or reagent)

(manufacture and polymerization of)

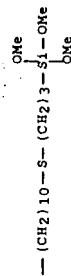
RN 170291-29-9 CAPLUS

CN Undecanoic acid, 11-[[3-(trimethoxysilyl)propyl]thio]-,  
oxydi-3,1,2-propanetriyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



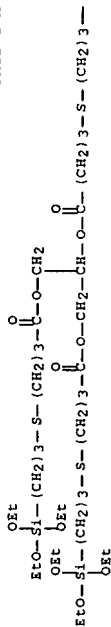
PAGE 1-B



RN 170291-30-2 CAPLUS

CN Butanoic acid, 4-[[3-(triethoxysilyl)propyl]thio]-, 1,2,3-propanetriyl  
ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RN 170291-32-4 CAPLUS

CN D-Glucitol, hexakis[3-[[3-(trimethoxysilyl)propyl]thio]propanoate]  
(9CI) (CA INDEX NAME)







filaments. The coated filaments were then dried and heated to give yarns with small friction coefficient, good filament separability, and excellent melt resistance.

IT 93933-52-9

RL: USES (Uses)

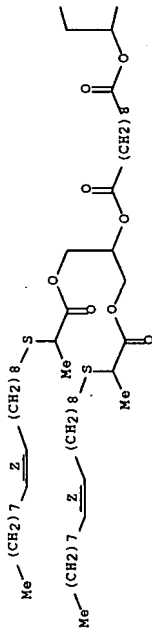
(lubricant finishes, containing nitrogen compounds, for acrylic precursors for carbon fibers)

RN 93933-52-9 CAPLUS

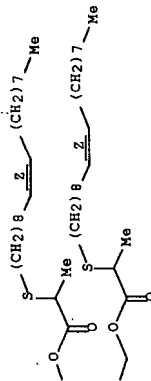
CN Decanedioic acid, bis(2-[3-(9-octadecenylthio)-1-oxopropoxy]-1-[(3-(9-octadecenylthio)-1-oxopropoxy)methyl]ethyl] ester, (all-Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



LI6 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1983:18071 CAPLUS Full-text

DOCUMENT NUMBER: 98:18071

TITLE: Lubricant finishes for synthetic fibers

PATENT ASSIGNEE(S): Matsumoto Yushi-Seiyaku Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57082573	A	19820524	JP 1980-156098	19801105
JP 61053473	B	19861118		

PRIORITY APPLN. INFO.:

JP 1980-156098

19801105

<--

AB Lubricant finishes containing an ester, amide, or thioester containing RS2(CO)n groups, where R is C1-22 aliphatic or aromatic hydrocarbon group, Z is alkylene, and n is 1 or 2, are heat-resistant and useful for finishing synthetic fibers. Thus, 3 mol olefmercaptan-acrylic acid reaction product was esterified with 1 mol glycerol to give an ester (I) [83995-03-3]. A lubricant composition (A) containing 60% I was heated 4 h at 220° without fume generation, whereas severe fume generation occurred for a similar composition containing oleyl oleate instead of I. Filament frictional coefficient was low in finishing nylon filaments with A composition

IT 83995-03-3

RL: USES (Uses)

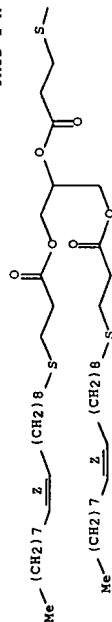
(lubricant finishes, heat-resistant, for nylon filaments)

RN 83995-03-3 CAPLUS

CN Propanoic acid, 3-(9-octadecenylthio)-, 1,2,3-propanetriyl ester, (2Z,2Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



LI6 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1980:605661 CAPLUS Full-text

DOCUMENT NUMBER: 93:205661

TITLE: Stabilizers for synthetic polymers comprising

2,2,6,6-tetramethyl-4-piperidyl carboxylic acid

ester, β-thioalkyl propionic acid ester and

phenol

INVENTOR(S): Haruna, Toru; Kubota, Nachiro; Minagawa, Motonobu;

Shibata, Toshihiro

PATENT ASSIGNEE(S): Argus Chemical Corp., USA

SOURCE: U.S., 55 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

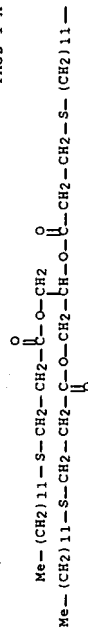
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4219463	A	19800826	US 1977-852254	19771117

JP 53073241 A 19780629 JP 1976-149092 19761210  
 JP 55035416 B 19800913 JP 1976-149092 A 19761210  
 PRIORITY APPLN. INFO.:  
 <--  
 <--  
 <--

AB Stabilizers for polymers contain tetramethylpiperidyl carboxylates, (alkylthio)propionate esters, and hindered phenols. Thus, PVC [9002-86-2] containing DOP 48, epoxidized soybean oil 2, (C9H19G6H4O)3P 0.2, Ca stearate 1, 2,2,6,6-tetramethyl-4-piperidyl benzoate [26275-88-7] 0.2, BHT 0.1, and trimethylolpropane tris[3-(octadecylthio)propionate] (I) [31687-07-7] 0.1 phr has Weather-O-Meter exposure resistance 515 h, compared with 385 with S(CH2CH2CO2C12H25)2 in place of I.

IT 31716-41-3 75518-84-2  
 RU: PEP (Physical, engineering or chemical process); PROC (Process) (stabilizers, for polymers)  
 RN 31716-41-3 CAPIUS  
 CN Propionic acid, 3-(dodecylthio)-, 1,2,3-propanetriyl ester (9CI) (CA INDEX NAME)

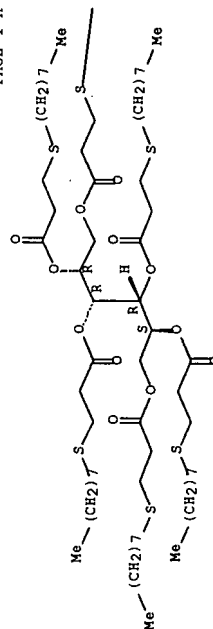
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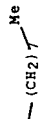
— Me

RN 75518-84-2 CAPIUS  
 CN D-Glucitol, hexakis[3-(octylthio)propanoate] (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



L16 ANSWER 12 OF 16 CAPIUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1980:77427 CAPIUS Full-text  
 DOCUMENT NUMBER: 92:77427  
 TITLE: Heat stabilizers for thermoplastics.  
 INVENTOR(S): Minagawa, Motonobu; Nakahara, Yutaka; Haruna, Toru  
 ADEKA ARGUS CHEMICAL CO., LTD., JAPAN  
 PATENT ASSIGNEE(S): Jpn. Kokai Tokkyo Koho, 14 pp.  
 SOURCE: CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54041948	B4	19790403	JP 1977-108098	19770908

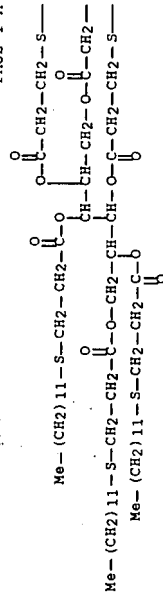
AB Comps. of thermoplastics 100, polyphosphites having alkyl-substituted Ph groups with or without pentaerythritol residues 0.001-5, and thioalkanoic acid derivs. 0.0001-5 parts have good heat stability. Thus, a mixture of Profax 6501 [9003-07-0] 100, Ca stearate 0.2, octadecyl 3-(3,5-di-tert-butylphenyl)propionate 0.1, pentaerythritol tetrakis(3-dodecylthiopropionate) (I) [29598-76-3] 0.2, and pentaerythritol bis(2,4-di-tert-butylphenyl phosphite) [26741-53-7] 0.1 part was extruded at 230-40°, pelletized, and injection molded at 250° and 475 kg/cm2 to give test pieces having heat stability in air at 160° 856 h and Hunter yellowness 8.4, compared with 267 and 11.3, resp., for a similar composition without I.

IT 71137-00-3

RL: MOA (Modifier or additive use); USES (Uses)  
 (heat stabilizers, containing polyphosphite esters, for thermoplastics)  
 RN 71137-00-3 CAPIUS.

CN D-Glucitol, hexakis[3-(dodecylthio)propanoate] (9CI) (CA INDEX NAME)

PAGE 1-A







DE 2028240 C3 19731122  
 DE 2028240 B2 19730322  
 JP 49023295 B 19740614 JP 1969-104891 19691227  
 JP 49046144 B 19741207 JP 1970-27132 19700331  
 JP 49046145 B 19741207 JP 1970-27133 19700331  
 US 3629194 A 19711221 US 1970-44656 19700608  
 JP 1969-45912 A 19690611  
 JP 1969-91184 A 19691115  
 JP 1969-104890 A 19691227  
 JP 1969-104891 A 19691227  
 JP 1969-104892 A 19691227  
 JP 1970-27132 A 19700331  
 JP 1970-27133 A 19700331  
 JP 1970-104890 A 19691227  
 JP 1970-104891 A 19691227  
 JP 1970-104892 A 19691227

PRIORITY APPLN. INFO.:

AB Polyolefins are stabilized against thermal decomposition with esters of  $\omega$ -(alkylthio)alkanoic acids and glycols, thio ether glycols, trimethylolalkanes, glycerol, or pentaerythritol. Thus, isotactic polypropylene powder was combined with a stabilizer, granulated by extrusion, and injection molded into 0.5-mm films, which were aged in an air oven at 140°. The unstabilized polymer became brittle within 3 hr, while comps. containing 0.3 or 0.6% octamethylene bis[3-(dodecylthio)propionate] required 126 and 191 hr, resp., to become brittle. A combination of 0.2% pentaerythritol tetrakis[3-(dodecylthio)propionate] and 0.1% n-octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate stabilized the composition for >3000 hr.

IT 31716-40-2 31716-41-3 31716-42-4

31716-44-6 31716-45-7 31716-46-8

31716-47-9

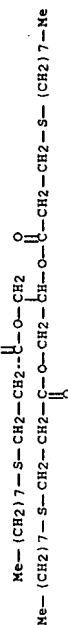
RL: USES (Uses)

(stabilizers, for polyene polymers)

31716-40-2 CAPIUS

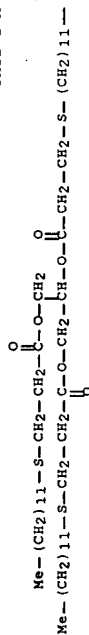
CN Propanoic acid, 3-(octylthio)-, 1,2,3-propanetriyl ester (9CI) (CA

INDEX NAME)



RN 31716-41-3 CAPIUS  
 CN Propanoic acid, 3-(dodecylthio)-, 1,2,3-propanetriyl ester (9CI) (CA

PAGE 1-A



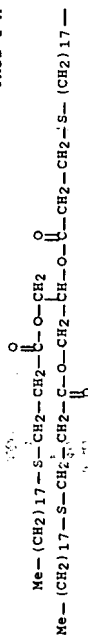
PAGE 1-B

-Me

RN 31716-42-4 CAPIUS  
 CN Propanoic acid, 3-(octadecylthio)-, 1,2,3-propanetriyl ester (9CI)

(CA INDEX NAME)

PAGE 1-A

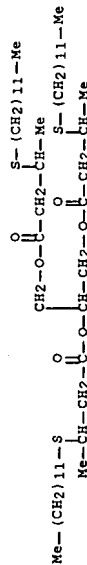


PAGE 1-B

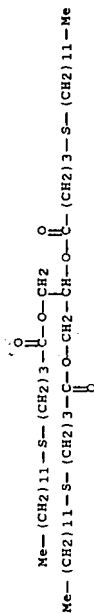
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RN 31716-44-6 CAPIUS  
 CN Butyric acid, 3-(dodecylthio)-, 1,2,3-propanetriyl ester (8CI) (CA

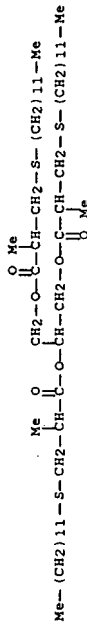
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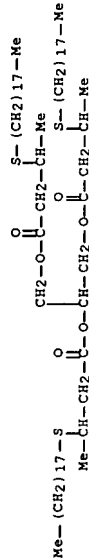
RN 31716-45-7 CAPIUS  
CN Butanoic acid, 4-(dodecylthio)-, 1,2,3-propanetriyl ester (9CI) (CA INDEX NAME)



RN 31716-46-8 CAPIUS  
CN Propionic acid, 3-(dodecylthio)-2-methyl-, 1,2,3-propanetriyl ester (8CI) (CA INDEX NAME)



RN 31716-47-9 CAPIUS  
CN Butyric acid, 3-(octadecylthio)-, 1,2,3-propanetriyl ester (8CI) (CA INDEX NAME)



L17  
2 S L5  
FILE 'CAOLD' ENTERED AT 15:44:31 ON 22 JUN 2007

L17 ANSWER 1 OF 2 CAOLD COPYRIGHT 2007 ACS on STN  
AN CA51:150469 CAOLD  
TI water utilization and treatment efficiency of Gulf Coast cooling towers  
AU Brooke, Maxey; et al.  
IT 1656-63-9 10564-67-7 18623-17-1 18819-96-0 18840-99-8  
102013-82-1 102899-70-7 10391-13-5 106141-85-9 120380-04-3  
121284-76-2 121426-17-3 122649-83-6

L17 ANSWER 2 OF 2 CAOLD COPYRIGHT 2007 ACS on STN  
AN CA51:9487h CAOLD  
TI promoters for the dropwise condensation of steam - (I) preparation of comds, containing monofunctional S groups, (II) containing polyfunctional S groups, (III) of Si and P comds., (IV) dropwise condensation and testing of comds.  
AU Blackman, Lionel C. F.; Dewar, M. J. S.

IT 105-58-8 1608-90-8 1656-63-9 2307-39-3 2885-00-9  
3862-18-8 5454-93-3 5455-43-6 5654-68-2 5875-26-3  
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L18 0 L5

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L19 22599 S "MILLER A"2/AU  
 L20 2001 S "JORGENSEN M"2/AU  
 L21 1106 S "BERGE R"2/AU  
 L22 144 S "SKORVE J"7/AU  
 L23 2 S L19 AND L20 AND L21 AND L22  
 L24 51 S L19 AND (L20 OR L21 OR L22)  
 L25 2 S L20 AND (L21 OR L22)  
 L26 115 S L21 AND L22  
 L27 428 SEA ABB-ON P14-ON (L19-L22 OR L24 OR L26) AND (PHG OR POLAR HEAD OR PHOSPHOLIPID? OR LYOPHOSPHO LIPID? OR (PHOSPHO OR LYOPHOSPHO) (W) LIPID? OR CERAMIDE OR MONACYLGLYCEROL OR TRIACYLGLYCEROL OR DIACYLGLYCEROL OR (MONACYL OR TRIACYL OR DIACYL) (W) GLYCEROL OR W(W) LINK? (W) (HG OR HEAD GROUP))  
 L28 983 SEA ABB-ON P14-ON (L19-L22 OR L24 OR L26) AND (PHOSPHATIDYL? OR LIPID OR PC OR PE OR PS OR PI OR PG OR PA) (S) PHOSPHATIDYL2)  
 L29 140 SEA ABB-ON P14-ON (L27 OR L28) AND SULFUR? OR SULPHUR? OR SULFAT? OR SULPHAT?  
 L30 89 S L29 AND (TREAT? OR THERAP? OR PREVENT?)  
 L31 59 S L29 AND INHIBIT?  
 L32 3 SEA ABB-ON P14-ON (L30 OR L31) AND (TOPICAL? OR PARENTAL? OR IV OR (I OR INTRA) (W) (V OR VENOUS?)) OR INTRA(W) (ABDOMEN OR ABDOMIN? OR PERITONEAL? OR INTRAPERITONEAL? OR PERITONEAL?)

L33 4 S L23 OR L25 OR L32  
 L34 3 DUP REM L33 (1 DUPLICATE REMOVED)

L34 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2007 ACS ON STN DUPLICATE 1  
 ACCESSION NUMBER: 2004:2894 CAPLUS Full-text  
 DOCUMENT NUMBER: 140:42422

TITLE: Preparation of sulfur-containing phospholipid

INVENTOR(S): Miller, Andrew David; Jorgensen, Michael Rael; Berge, Rolf; Skorve, Jon

PATENT ASSIGNEE(S): Ic Vec limited, UK; Thia Medica AS

SOURCE: PCT Int. Appl., 113 pp.

DOCUMENT TYPE: Patent

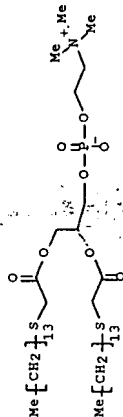
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004000854	A1	20031231	WO 2003-GB2582	20030616
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, FI, GB, GD, GE, GH, GM, GR, GU, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	KE, KZ, MG, MU, MW, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BU, CF, CI, CM, GA, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2490121	A1	20031231	CA 2003-2490121	20030616

AU 2003278602 A1 20040106 AU 2003-278602 20030616  
 EP 1515978 A1 20050323 EP 2003-740736 20030616  
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 CN 1675229 A 20050928 CN 2003-817434 20030616  
 JP 2005329969 T 20051006 JP 2004-315006 20030616  
 NZ 537762 A 20070223 NZ 2003-537762 20030616  
 IN 2004020210 IN 2004-CN2846 20041215  
 NO 2004005562 A 20050217 NO 2004-5562 20041220  
 ZA 2005000558 A 20051017 ZA 2005-558 20050120  
 US 2006105987 A1 20060518 US 2005-518427 20050930  
 PRIORITY APPLN. INFO.: GB 2002-14267 A 20020620  
 GB 2002-17506 A 20020729  
 WO 2003-GB2582 W 20030616

OTHER SOURCE(S): MARPAT 140:42422  
 GI



AB The present invention provides a lipid compound comprising at least one non-polar moiety and a polar moiety, wherein each or at least one non-polar moiety is of the formula X-Y-Z-, wherein X is a hydrocarbyl chain, Y is selected from at least one of S, Se, SO, SO<sub>2</sub>, and O, and Z is an optional hydrocarbyl group, wherein the polar moiety is of the formula -[C(O)]mPHG, wherein PHG is a polar head group, and wherein m is the number of non-polar moieties. Thus, esterified tetradecylthioacetic acid (TTA) phosphatidylcholines (PCs) and triacylglycerides (TAGs), e.g. I, were prepared. Effect of esterified and non-esterified TTA on palmitoyl-CoA oxidation in rat liver homogenate. Effect of esterified and non-esterified TTA on the mitochondrial carnitine palmitoyltransferase-II activity. Effect of esterified and non-esterified TTA on the 3-hydroxy-3-methylglutaryl-CoA synthase activity in rat liver homogenate. Effect of esterified and non-esterified TTA on the fatty acyl-CoA oxidase activity in rat liver homogenate. Effect of esterified and non-esterified TTA containing liposomes on plasma lipids in male Wistar rats. The compounds of the present invention (TTA-PC and TTA-TAG) have been demonstrated to increase fatty acid oxidation and decrease plasma and hepatic lipid levels. THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 2 OF 3 MEDLINE on STN  
 ACCESSION NUMBER: 2001610006 MEDLINE Full-text  
 DOCUMENT NUMBER: Pubmed ID: 11684079  
 TITLE: Sustained retention of tetradecylthioacetic acid after local delivery reduces angioplasty-induced coronary stenosis in the minipig.

AUTHOR: Pettersen R J; Muna Z A; Kuiper K K; Svendsen E; Muller F; Aukrust P; Berge R K; Nordrehaug J E  
CORPORATE SOURCE: Department of Heart Disease, Haukeland University Hospital, N-5021, Bergen, Norway.. rpetchaukland.no  
SOURCE: Cardiovascular research, (2001 Nov) Vol. 52, No. 2, Pp. 306-13  
Journal code: 0077427. ISSN: 0008-6363.  
Netherlands  
PUB. COUNTRY: (RESEARCH SUPPORT, NON-U.S. GOV'T)  
DOCUMENT TYPE: English  
LANGUAGE: Priority Journals  
FILE SEGMENT: 200201  
ENTRY MONTH: Entered STN: 2 Nov 2001  
ENTRY DATE: Last Updated on STN: 25 Jan 2002  
Entered Medline: 7 Jan 2002

AB OBJECTIVE: The sulfur containing tetradecylthioacetic acid (TTA) has a profound effect on lipid metabolism and may also exert antioxidant and anti-inflammatory actions and thereby counteract coronary stenosis after angioplasty balloon injury. This study examined the possible modulatory effects of TTA, delivered locally, on coronary stenosis in minipigs and the underlying mechanisms of action. METHODS: Coronary balloon angioplasty injury using an oversized balloon was performed to 40 coronary arteries (20 minipigs, Sus Scrofa, Gamelarsøed) followed by delivery of placebo or TTA via a local drug delivery balloon catheter. TTA was radiolabelled in four pigs. Quantitative coronary angiography and intracoronary ultrasound (ICUS) were performed before and after injury, and after 4 weeks of follow-up. The arteries were examined with histomorphometry. The antioxidant and anti-inflammatory effects of TTA were examined on LDL oxidation and stimulated release of interleukin (IL)-2 and IL-10 in human peripheral blood mononuclear cells (PBMC), respectively. RESULTS: Radioactive TTA was present in the coronary wall after 4 weeks. Angiographic minimal luminal diameter (mean  $\pm$  S.E.M.) in the placebo and TTA group was  $1.3 \pm 0.1$  vs.  $2.2 \pm 0.2$  mm ( $P < 0.01$ ) at follow-up, stenosis rate was 55 and 20% ( $P < 0.01$ ). Remodeling was  $-0.56 \pm 0.12$  in the TTA group and  $-1.28 \pm 0.09$  in the placebo group ( $P < 0.01$ ). TTA significantly prolonged the lag time of LDL oxidation. In phytohemagglutinin stimulated PBMC, TTA significantly decreased IL-2 levels and increased IL-10 levels suggesting a marked anti-inflammatory net effect. CONCLUSIONS: Local delivery of TTA reduces coronary artery stenosis after PTCA as assessed by both angiographic, histomorphometric and ICUS examinations by influencing vessel remodeling rather than intimal hyperplasia. The underlying mechanism(s) seem to involve antioxidant and anti-inflammatory effects of this fatty acid analogue.

L34 ANSWER 3 OF 3 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2000-126356 [11] WPIX  
CROSS REFERENCE: 2000-038952; 2000-096828; 2000-105537  
DOC. NO. CPI: C2000-038393 [11]  
TITLE: Use of fatty acid analogues, for treatment and/or prevention of obesity, fatty liver and hypertension  
DERWENT CLASS: B05; C03  
INVENTOR: BERGE R; CARPOTTI R; DAVIES B W; DILWORTH B  
PATENT ASSIGNEE: (ES-SO-C) EXXON CHEM PATENTS INC; (THIA-N) THIA MEDICA AS  
COUNTRY COUNT: 85

PATENT INFO ABBR.:  
73

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 958121	A1	19991118	(200011)	* EN	65	[8]
AU 9949366	A	19991129	(200018)	EN		
EP 1075258	A1	20010214	(200111)	EN		
BR 9910296	A	20020115	(200214)	PT	55	
JP 2002514594	W	20020521	(200236)	JA		
US 6441036	B1	20020827	(200259)	EN		
EP 1285652	A1	20030226	(200319)	EN		
EP 1284139	A1	20030219	(200321)	EN		
AU 762792	B	20030703	(200354)	EN		
EP 1075258	B1	20030820	(200356)	EN		
NZ 508045	A	20030829	(200365)	EN		
RU 2219920	C2	20031227	(200413)	RU		
ES 2207253	T3	20040516	(200434)	ES		
EP 1285652	B1	20060816	(200655)	EN		
DE 69932864	E	20060914	(200661)	DE		
DE 69932864	E	20060928	(200667)	DE		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 958121	A1	WO 1999-NO135	19990423
AU 9949366	A	AU 1999-49366	19990423
AU 762792	B	AU 1999-49366	19990423
BR 9910296	A	BR 1999-10296	19990423
DE 69932645	E	DE 1999-632645	19990423
EP 1075258	A1	EP 1999-933292	19990423
EP 1285652	A1 Div Ex	EP 1999-933292	19990423
EP 1284139	A1 Div Ex	EP 1999-933292	19990423
EP 1075258	B1	EP 1999-933292	19990423
ES 2207253	T3	EP 1999-933292	19990423
EP 1285652	B1 Div Ex	EP 1999-933292	19990423
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BR 9910296	A	WO 1999-NO135	19990423
JP 2002514594	W	WO 1999-NO135	19990423
US 6441036	B1	WO 1999-NO135	19990423
EP 1075258	B1	WO 1999-NO135	19990423
NZ 508045	A	WO 1999-NO135	19990423
RU 2219920	C2	WO 1999-NO135	19990423
JP 2002514594	W	JP 2000-547972	19990423
RU 2219920	C2	RU 2000-131222	19990423
US 6441036	B1	US 2001-700061	20010127
EP 1284139	A1	EP 2002-24388	19990423
EP 1075258	B1	EP 2002-24388	19990423
DE 69932645	E	EP 2002-24388	19990423
EP 1285652	A1	EP 2002-24616	19990423
EP 1075258	B1	EP 2002-24616	19990423
EP 1285652	B1	EP 2002-24616	19990423
DE 69932864	E	DE 1999-632864	19990423
DE 69932864	E	EP 2002-24616	19990423

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 762792	B	Previous Publ
EP 1285652	A1	Div ex
		AU 9949366
		EP 1075258
		A
		A

EP 1284139 A1 Div ex EP 1075258 A  
 ES 2207253 T3 Based on EP 1075258 A  
 EP 1285652 B1 Div ex EP 1075258 A  
 EP 1075258 B1 Related to EP 1284139 A  
 DE 69932645 E Based on EP 1285652 A  
 EP 1075258 B1 Related to WO 958121 A  
 AU 9949366 A Based on WO 958121 A  
 EP 1075258 A1 Based on WO 958121 A  
 BR 9910296 A Based on WO 958121 A  
 US 6441036 B1 Based on WO 958121 A  
 AU 762792 B Based on WO 958121 A  
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 NZ 508045 A Based on WO 958121 A  
 RU 2219920 C2 Based on WO 958121 A  
 JP 2002514594 W Based on WO 958121 A  
 DE 69932864 E Based on EP 1285652 A

PRIORITY APPLN. INFO: WO 1998-NO143 19980508

AN 2000-126358 [11] WPIX  
 CR 2000-038952; 2000-096828; 2000-105537  
 AB WO 1999058121 A1 UPAB: 20060115  
 NOVELTY - Novel fatty acid analogues (I), their salts, prodrugs or complexes are used for the preparation of pharmaceutical compositions.  
 DETAILED DESCRIPTION - The fatty acid analogues of formula (I), their salts, prodrugs or complexes are used for the preparation of pharmaceutical compositions.  
 CH3-(CH2)m-(X1-CH2)n-COOR (I) n = 1-12;  
 m = 0-23;  
 i = odd number, which indicates the position of COOR; X1 = O, S, SO2, Se or CH2; provided at least one X1 is not CH2; and  
 R = H or 1-4C alkyl.

INDEPENDENT CLAIMS are also included for: (i) novel fatty acid analogues (I); hence to improve the quality of meat, milk and eggs. The method involves adding a feed product comprising the fatty acid analogues (I) to the diet of animals. ACTIVITY - Hypotensive (claimed); Anorectic (claimed). Male obese Zucker fa/fa rats weighing 100 g are acclimatized for at least one week to 20 $\pm$ 3 degreesC. Test sample tetracycloacetic acid (TTA) and control sample palmitic acid are suspended in 0.5% (w/v) carboxymethyl cellulose. Two groups consisting of six animals each are administered with a control and test sample at a dosage of 300 mg/day/kg body weight, by gastric intubation once daily for 10 days. The blood and organs are collected after sacrificing the rats and the lipid concentration in plasma is determined. The results showed that the decrease in level of triglycerides, cholesterol and phospholipids in plasma are 72%, 73% and 71%, respectively when compared to control.

MECHANISM OF ACTION - The compound (I) increases the oxidation (beta oxidation) and reduces the availability of fatty acid for esterification. Thus the compound modifies the composition of the lipids in various tissues.

USE - For treatment and/or prevention of multi metabolic syndrome such as hyperinsulinemia, insulin resistance, obesity, glucose intolerance, type 2 diabetes mellitus, dyslipidemia and/or hypertension (all claimed).  
 ADVANTAGE - The synthesis of triacylglycerol and cholesterol is reduced and secretion of very low density lipoprotein (VLDL) from the liver is decreased. The compound is also reduces the secretion of very low density lipoprotein (VLDL) from the liver is decreased. The compound is also reduces the production of low density lipoprotein (LDL). Tetracycloacetic acid (TTA) is found to decrease hyperinsulinemia and improve insulin action on glucose utilization without increasing the body weight.

Member(0003)  
 ABEQ EP 1075258 A1 UPAB 20060115  
 NOVELTY - Novel fatty acid analogues (I), their salts, prodrugs or complexes are used for the preparation of pharmaceutical compositions.  
 DETAILED DESCRIPTION - The fatty acid analogues of formula (I), their salts, prodrugs or complexes are used for the preparation of pharmaceutical compositions.

CH3-(CH2)m-(X1-CH2)n-COOR (I)

n = 1-12;

m = 0-23;

i = odd number, which indicates the position of COOR; X1 = O, S, SO2, Se or CH2; provided at least one X1 is not

CH2; and

R = H or 1-4C alkyl.

INDEPENDENT CLAIMS are also included for:

(i) novel fatty acid analogues (I);

(ii) the method of modifying fat distribution and content of animals, and hence to improve the quality of meat, milk and eggs. The method involves adding a feed product comprising the fatty acid analogues (I) to the diet of animals.

ACTIVITY - Hypotensive (claimed); Anorectic (claimed).

Male obese Zucker fa/fa rats weighing 100 g are acclimatized for at least one week to 20 $\pm$ 3 degreesC. Test sample tetracycloacetic acid (TTA) and control sample palmitic acid are suspended in 0.5% (w/v) carboxymethyl cellulose. Two groups consisting of six animals each are administered with a control and test sample at a dosage of 300 mg/day/kg body weight, by gastric intubation once daily for 10 days. The blood and organs are collected after sacrificing the rats and the lipid concentration in plasma is determined. The results showed that the decrease in level of triglycerides, cholesterol and phospholipids in plasma are 72%, 73% and 71%, respectively when compared to control.

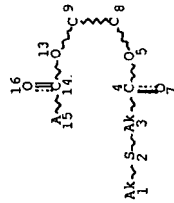
MECHANISM OF ACTION - The compound (I) increases the mitochondrial fatty acid oxidation (beta oxidation) and reduces the availability of fatty acid for esterification. Thus the compound modifies the composition of the lipids in various tissues.

USE - For treatment and/or prevention of multi metabolic syndrome such as hyperinsulinemia, insulin resistance, obesity, glucose intolerance, type 2 diabetes mellitus, dyslipidemia and/or hypertension (all claimed).

ADVANTAGE - The synthesis of triacylglycerol and cholesterol is reduced and secretion of very low density lipoprotein (VLDL) from the liver is decreased. The compound is also reduces the production of low density lipoprotein (LDL). Tetracycloacetic acid (TTA) is found to decrease hyperinsulinemia and improve insulin action on glucose utilization without increasing the body weight.

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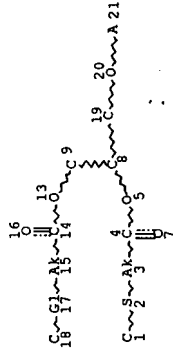
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 CONNECT IS X2 RC AT 9  
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 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
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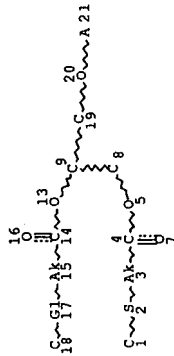
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 CONNECT IS X2 RC AT 9  
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 DEFAULT ECLEVEL IS LIMITED

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STEREO ATTRIBUTES: NONE  
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 CONNECT IS X2 RC AT 8  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

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STEREO ATTRIBUTES: NONE  
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 L6 41 SEA FILE=REGISTRY ABB=ON PLU=ON L5 AND P=>1

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 L3 STR  
 L4 STR  
 L5 109 SEA SUB=L2 SSS FUL (L3 OR L4)  
 L6 41 SEA ABB=ON PLU=ON L5 AND P=>1

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 D QUE STAT

L7 FILE 'CAPLUS' ENTERED AT 15:36:55 ON 22 JUN 2007  
 16 SEA ABB=ON PLU=ON L6  
 DEL SEL Y  
 SEL HIT L7 1-16 RN  
 D L7 1-16 IBIB ABS HITSTR

L8 FILE 'CAOLD' ENTERED AT 15:37:44 ON 22 JUN 2007  
 0 SEA ABB=ON PLU=ON L6

L9 FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 15:38:00 ON 22 JUN 2007  
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 23 SEA ABB=ON PLU=ON L10 NOT L7  
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 18 SEA ABB=ON PLU=ON L11 AND PATENT/DT  
 15 SEA ABB=ON PLU=ON L12 AND (PY<2002 OR AY<2002 OR

L14 5 SEA ABB=ON PUJ=ON L11 NOT L12  
L15 1 SEA ABB=ON PUJ=ON L14 NOT PY<2002  
L16 16 SEA ABB=ON PUJ=ON L13 OR L15  
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2001 SEA ABB=ON PUJ=ON "JORGENSEN M"/AU  
L20 1106 SEA ABB=ON PUJ=ON "BERGE R"/AU  
L21 144 SEA ABB=ON PUJ=ON "SKORVE J"/AU  
L22 2 SEA ABB=ON PUJ=ON L19 AND L20 AND L21 AND L22  
L23 51 SEA ABB=ON PUJ=ON L19 AND L20 OR L21 OR L22  
L24 2 SEA ABB=ON PUJ=ON L20 AND L21 OR L22  
L25 115 SEA ABB=ON PUJ=ON L21 AND L22  
L26 428 SEA ABB=ON PUJ=ON (L19 OR L20 OR L21 OR L22) OR L24 OR  
L27 L26) AND (PHG OR POLAR HEAD OR PHOSPHOLIPID? OR LYOPHOSPHO  
LIPID? OR (PHOSPHO OR LYOPHOSPHO) (W) LIPID? OR CERAMIDE  
OR MONACYLGLYCEROL OR TRIACYLGLYCEROL OR DIACYLGLYCEROL OR  
(MONACYL OR TRIACYL OR DIACYL) (W) GLYCEROL OR W(W)  
LINK?(W) (HG OR HEAD GROUP))

L28 983 SEA ABB=ON PUJ=ON (L19 OR L20 OR L21 OR L22) OR L24 OR  
L26) AND (PHOSPHATIDYL? OR LIPID OR (PC OR PE OR PS OR PI  
OR PG OR PA) (S) PHOSPHATIDYL?)

L29 140 SEA ABB=ON PUJ=ON (L27 OR L28) AND (SULFUR? OR SULPHUR?  
OR SULFAT? OR SULPHAT?)

L30 89 SEA ABB=ON PUJ=ON L29 AND (TREAT? OR THERAP? OR PREVENT?)

L31 59 SEA ABB=ON PUJ=ON L29 AND INHIBIT?

L32 3 SEA ABB=ON PUJ=ON (L30 OR L31) AND (TOPICAL? OR PARENTAL?  
OR IV OR (I? OR INTRA) (W) (V OR VENOUS?) OR INTRA(W) (ABDOMEN  
OR ABDOMIN? OR PERITONEAL?) OR INTRAPERITONEAL? OR  
PERITONEAL?)

L33 4 SEA ABB=ON PUJ=ON L23 OR L25 OR L32  
L34 3 DUP REM L33 (1 DUPLICATE REMOVED)  
D 1-3 IBIB ABS

FILE 'HOME' ENTERED AT 16:01:40 ON 22 JUN 2007  
D QUE L6

FILE REGISTRY  
Property values tagged with IC are from the ZIC/VINITI data file  
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DICTIONARY FILE UPDATES: 21 JUN 2007 HIGHEST RN 938223-21-3

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FILE LAST UPDATED: 21 Jun 2007 (20070621/ED)

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FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate  
substance identification. Title keywords, authors, patent  
assignees, and patent information, e.g., patent numbers, are  
now searchable from 1907-1966. TIFF images of CA abstracts  
printed between 1907-1966 are available in the PAGE  
display formats.

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This file supports REGISTRY for direct browsing and searching of  
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#### FILE MEDLINE

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substance identification.

#### FILE BIOSIS

FILE COVERS 1926 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNS) PRESENT

FROM JANUARY 1926 TO DATE.

RECORDS LAST ADDED: 20 June 2007 (20070620/ED)

Biosis has been augmented with 1.8 million archival records from 1926 through 1968. These records have been re-indexed to match current BIOSIS indexing.

## FILE EMBASE

FILE COVERS 1974 TO 22 JUN 2007 (20070622/ED)

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

## FILE WPIX

FILE LAST UPDATED: 20 JUN 2007 <20070620/UP>

MOST RECENT THOMSON SCIENTIFIC UPDATE: 200739 <200739/DW>

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<http://scientific.thomson.com/media/scpdf/ipcrchdpi.pdf>

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## FILE JAPIO

FILE LAST UPDATED: 19 JUN 2007 <20070619/UP>

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